Yemen Emergency Human Capital Project - YEHCP

PIDA31910

Environmental and Social Management Plan

ESMP No. 2

Sanitation Network Sub-projects in Urban Areas

(Dhamar Governorate)

One Sub-project

11 April 2023

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Abbreviations

BOQs	Bills of Quantities
CoC	Code of Conduct
CHM	Complaint Handling Mechanism
COVID-19	Coronavirus disease
E	East
E&S	Environmental and Social
EHS	Environmental, Health, and safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESPECRP	Emergency Social Protection Enhancement and COVID-19 Response Project
ESR	Environmental and Social Responsiveness
GBV	Gender-Based Violence
GRM	Grievance Redress Mechanism
HNO	Humanitarian Needs Overview
HQ	Head Quarter
IDP	Internal Displaced Persons
IDs	Personal Identifications Cards
IPC	Integrated Phase Classification
N	North
O&M	Operation and maintenance
OHS	Occupational Health and Safety
PPEs	Personal Protective Equipment's
PWP	Public Works Project
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SFD	Social Fund for Development
SH	Sexual Harassment
SRM	Stakeholder Response Mechanism
TPM	Third Party Monitoring
UNDP	United Nation for Development Program
UNICEF	the United Nations International Children's Emergency Fund
UNOPS	UNITED NATIONS OFFICE FOR PROJECT SERVICES
US	United States of America
WASH	Water, Sanitation, and Hygiene
WBG	World Bank Group

1. Introduction:

Under the umbrella of the YEHCP environmental and social management framework ESMF[1], which was prepared in accordance with the requirements of the WB ESF, in addition to environmental and social commitment plan (ESCP), Labor Management Plan (LMP), Resettlement Framework, and Stakeholder Engagement Plan (SEP). PWP prepared this environmental and social management plans (ESMPs) for all the sub-projects proposed to be implemented by PWP. In this ESMP, PWP studied all the environmental and social aspects within the sub-projects and the impacts and risks that may emerge due to the implementation. Additionally, the ESMP reflects methodologies of analyzing, handling, and managing environmental, social, and OHS impacts, and the procedures that PWP will follow while reflecting the roles of the different implementation parties as well.

In this ESMP, the sub-project falls under the sanitation sector which is to implement a sanitation network (2850 LM) for the targeted neighborhoods to be connected to the sanitation system in the city.

The sub-project will be implemented by contractors. PWP completed its field visits in June 2022 for the physical environmental and social screening purposes and for the stakeholder and public consultation with all affected parties of the sub-project to ensure the sustainability of these interventions.

The sub-project risk under this ESMP is rated as moderate based on the primary screening and the study of the anticipated risks and impacts, and considering that no significant adverse environmental, social or occupational health and safety impacts are anticipated and any potential impacts that may emerge during the sub-project life cycle will be managed properly to an acceptable manner to the project ESMF and WB ESF).

Name of the Subproject:	Sanitation Network in Dhamar City Medical College Neighborhood Urban Areas
Subprojects ID:	09-4-14754
Subprojects Locations	Dhamar
Sector and Type of Subproject:	WASH
Implementing of the Subproject:	PWP
Estimated Cost of ESMP implementation	US$ 8500
Field Visit (Yes/No; Include Date):	Yes- June 2022 for physical screening
Was Consultation Carried out? (Yes/No):	Yes- Refer to Public Consultation Section
Proposed Class of Subproject (Low to High):	Moderate
Implementation Modality	Contracting Modality

Table 1 introduction general information

[1] https://www.pwpyemen.org/index.php/en/media-center-en/publications/category/16-yemen-emergency-human-capital-project-yehcp

2 Project Description:

The targeted neighborhoods around the Medical College of Dhamar City are not provided with sanitation services and the communities use cesspits for the disposal of sewage. Each house has more than one cesspit which with time they are filled up and started overflow into the streets. The communities are suffering from the existing sanitation disposal system and environmental pollution in their neighborhoods as well as it is anticipated that the used cesspits will lead to environmental pollution for the aquifer in the long run. The local authorities and communities raised their need for PWP to implement a sanitation network. In response to the communities' needs, PWP through UNOPS has proposed to implement sanitation intervention to mitigate the community suffering in the targeted location.

The subproject is to implement a sanitation network for 250 house/building around Dhamar City Medical College. The sub-project will include the construction of a total length of 2,850 m sanitation network with 134 manholes and inspection chambers. These interventions aim to serve the targeted areas with a sanitation system and connect it to the main network system in the city to reduce environmental pollution and enhance the health situation. The work will be implemented section by section to avoid restriction of access in coordination with local communities and local authorities in a short period. Based on the current main system of the city, which consists of a sewage network with a length of about 165,000 meters and a wastewater treatment plant with a capacity of 11,000 m3/day, it was estimated by the Local Water Supply and Sanitation Corporation (LWSSC)[2] that WWTP received an influx of up to 6200 m3/day. As a result of the new construction (about 350 new house connections), sewage influent will increase by188 m3/day, bringing the total to 6,388 m3/day. The current system will be capable of covering the expansion of the new network.

The total number of direct and indirect beneficiaries that will be benefiting from this sub-project is 3,763 persons of which 1,920 are men and 1,843 are women. The direct beneficiaries are those homeowners who will be served by the sanitation network (as houses will be connected to the sewerage network for free), also, the skilled and unskilled workers will benefit from work opportunities.

The subproject will be implemented through a contracting modality and the implementation period of eight months. The estimated cost of this ESMP implementation will be 8,500 US$; some of this amount will be part of the subproject contracted costs such as PPEs, Covid-19 requirement, and providing latrines in sites (the contractor will rent an apartment with latrines as subproject office); other costs, staffing, consultations, and awareness materials, will be covered from the safeguarding budget that is mentioned in this ESMP.

The contractor will hire the workforce from the targeted areas as possible. There is no need for accommodation, given the fact that some parts of the activities require skilled labor, these tasks will be undertaken by appropriately skilled workers from the targeted areas and when not available, the contractors will hire skilled laborers from nearby areas, therefore, they will be able to return to their homes daily after finishing their work time. The contractor will rent an apartment (as subproject office) with latrines that discharge into existing cesspit or linked to the sewerage network. Each of the civil work will maximize the use of manual labor to support local employment and provide incomes for local communities during the sub-project's implementation period. The contractors will be responsible for protecting their workers and communities during implementation and applying the E&S mitigation measures and providing the required training, tools, and necessary PPEs for workers.

[2] Local Water Supply and Sanitation Corporation (LWSSC) is responsible for operation and maintenance with 83 technical and administration staff.

2-1 Scope of Work:

This ESMP is prepared for one sanitation network sub-project. The sub-project will follow the designed sanitation lines defined by relevant local authorities. The activities will include excavation, supplying of sewage pipes, casting of manholes, and installing the manholes and pipes to be connected from houses to the sewage system in the city. The city has its sewage system that is connected to the treatment plant.

The activities for the sanitation network in the subproject include but are not limited to the following:

- Cut, and remove the asphalt or stones in some cases, if needed.
- Excavation and leveling for the sewage lines (the Excavation depth will vary according to the required levels as per the designs and will be (1m to 5m).
- Construct pre-cast manholes and inspection chambers using reinforced concrete on the worksite (Manhole construction with backdrop). The manholes and inspection chambers dimensions are as follows:

SP ID	Type of Manholes	Diameter (m)	Depth (m)	NO.
09-4-14754	Type A1	1	0 – 2	46
	Type A1	1	2-3	12
	Type B	1.2	> 3	4
	Inspection Chamber	0.60 – 0.80	0 -2	72

- Installing pre-cast Manholes.
- Installing the inspection chambers with dimensions of 0.6 m and 0.8 m diameter and depth of 0 – 1,2 m and 1,2 – 2 m.
- Supplying the sewage pipes to the worksite.
- Installing the sewage pipes. The pipes details are as follows:

SP ID	Pipes Type	Diameter (mm)	Length (m)
09-4-14754	UPVC – 6 bars	150	800
	UPVC – 6 bars	200	1650
	UPVC – 6 bars	300	400

- Backfilling using the extracted soil or proper materials.
- Leveling and compaction work.
- Suction and backfilling of existing cesspits (290 cesspits).
- Painting of manhole covers with epoxy.
- Taking care and rehabilitation of underground other services connections, (i.e., water supply network, phone networks, electricity networks, etc.) if any.

Connecting the newly installed pipes to the existing main sewerage system (connecting the new intervention to the old network).

- Collecting and transporting construction residues to areas appointed by local authorities.[3]
- Planting native noninvasive trees[4] on the footpaths in each section of the sub-projects.

[3] Construction residues will be collected and transported and disposed to the authorized location in coordination with the local authority.

[4] Tree planting is included as a priced item in the Bills of Quantities priced by the contractor, as positive Environmental improvement measure. Contractor will deliver the plants from local Nurseries trees, and numbers of trees/saplings will be according to the BoQ as per the site engineer recommendations, as described in the BOQs of the subproject. Location of tree planting will be in suggested locations by Project engineers.

The following table shows the names of sub-project and the technical details related to the number of manholes and sanitation length, average estimated costs, ESMPs cost, and estimated number of labor:

No	UNOPS ID	Sub-Project ID	Subproject Name	Governorate	Number of Manholes and Inspection chambers	Network Length (m)	Excavation Depth (m)	Average estimated cost for ESMP Implementation US$[5]	Estimated/ planned No. of Labor[6]
1	EHC-PWP-DHAM-1	09-4-14754	Sanitation network for Medical College neighborhood	Dhamaar	134	2,850	0 - 4	8,500	173[7]
Total					**134**	**2850**	**———**	**8500**	**173**

Table 2: shows the details of the proposed sanitation network

[5] The estimated costs of ESMPs implementation will differ from sub-project to another. Some of these expenses will be part of the subproject-contracted cost such as PPEs, Covid-19 requirement, and providing latrines in sites; other cost, staffing, consultations, and awareness materials, will be covered from the safeguarding budget that is mentioned in the ESMF.

[6] Number of workers is calculated as follows: 25% of estimated project cost of all projects /(Average daily wages for each worker(12$)/no of working days per month (22); Skilled labors is estimated as 1/3 of total no of labors with minimum daily wages for each skilled worker(18$); Non Skilled labor is estimated as 2/3 of total no of labors with minimum daily wages for each unskilled worker(9$).

7 Because of the poverty among the society, PWP has a responsibility to give work chances for as much workers it can. For this purpose and as possible, PWP will give 22 working days for every worker to enlarge the number of workers and cover the need. More than that not all the workers will work at the same time, but they will be changed every period during the implementation as possible. . It is estimated that the number of workers to not exceed 15 per day

Typical Drawings:

Figure 1 is a typical cross-section for inspection chambers details and a cross-section for a sample of excavation depth. Figure 2 is a typical cross-section of Manhole Types 1 and 2 details. These will be used as part of the design for the proposed sanitation networks.

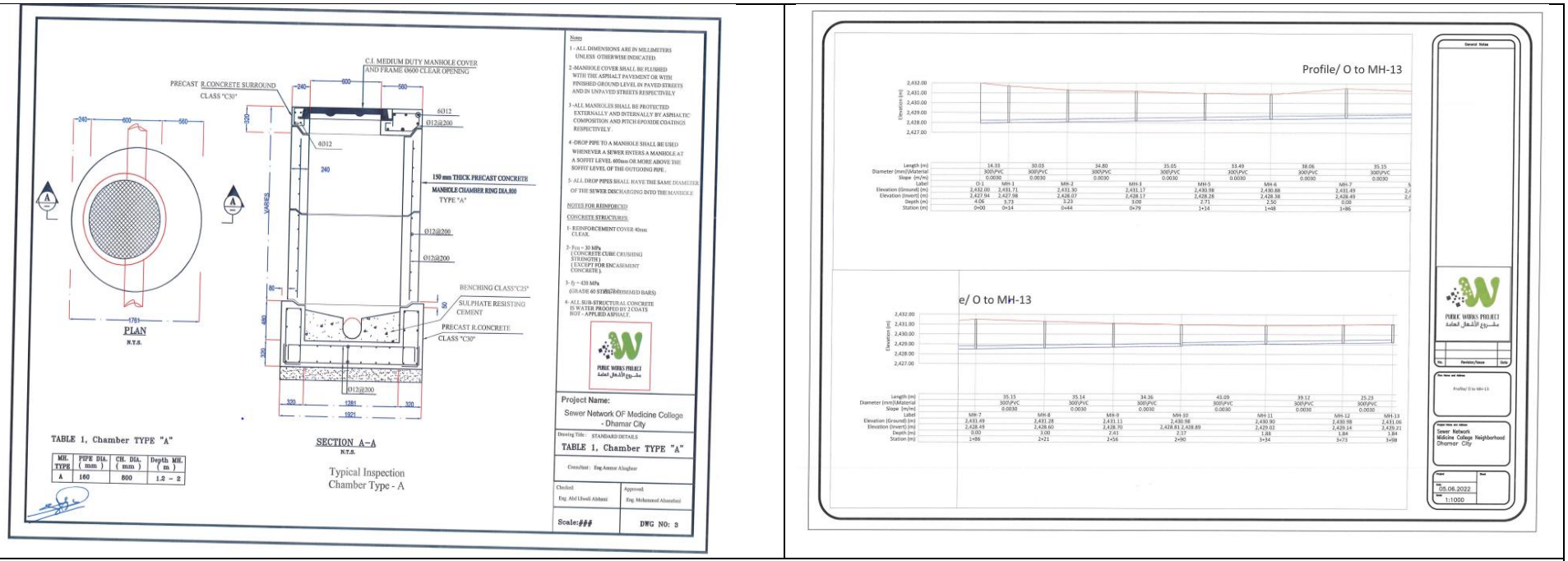


Figure 1: typical cross-section for inspection chambers details and cross-section for a sample of excavation depth.

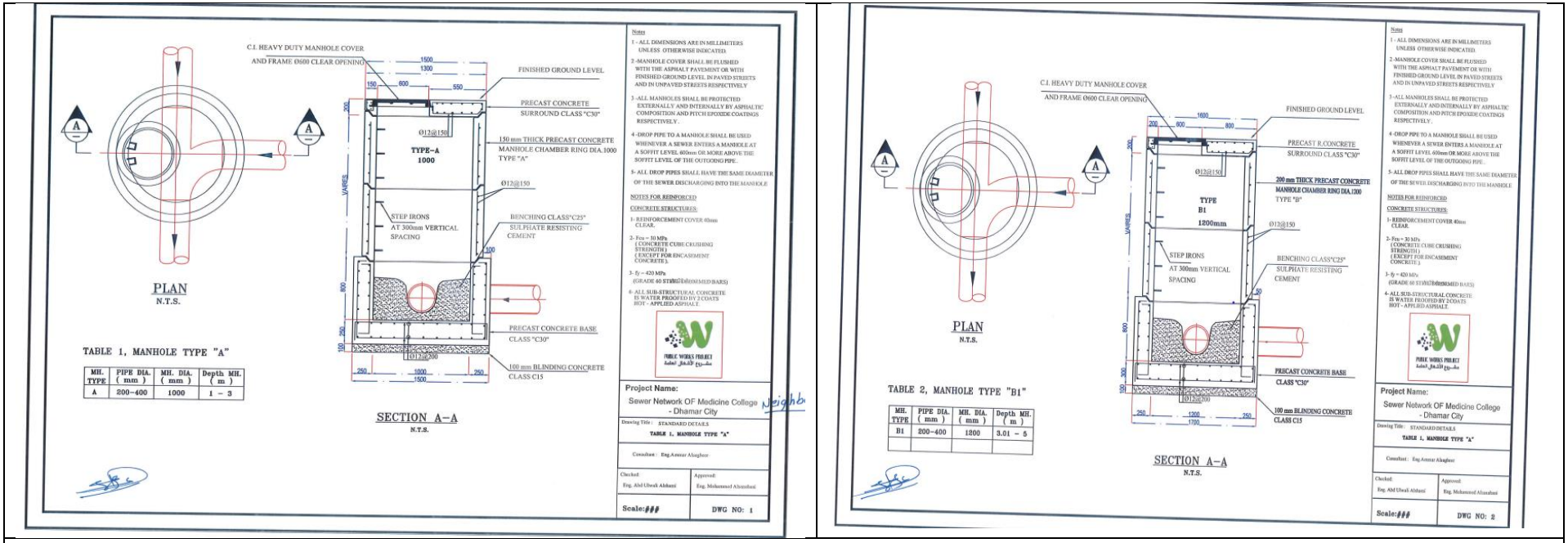


Figure 2: typical cross-section for the details of Manhole Types 1 and 2.

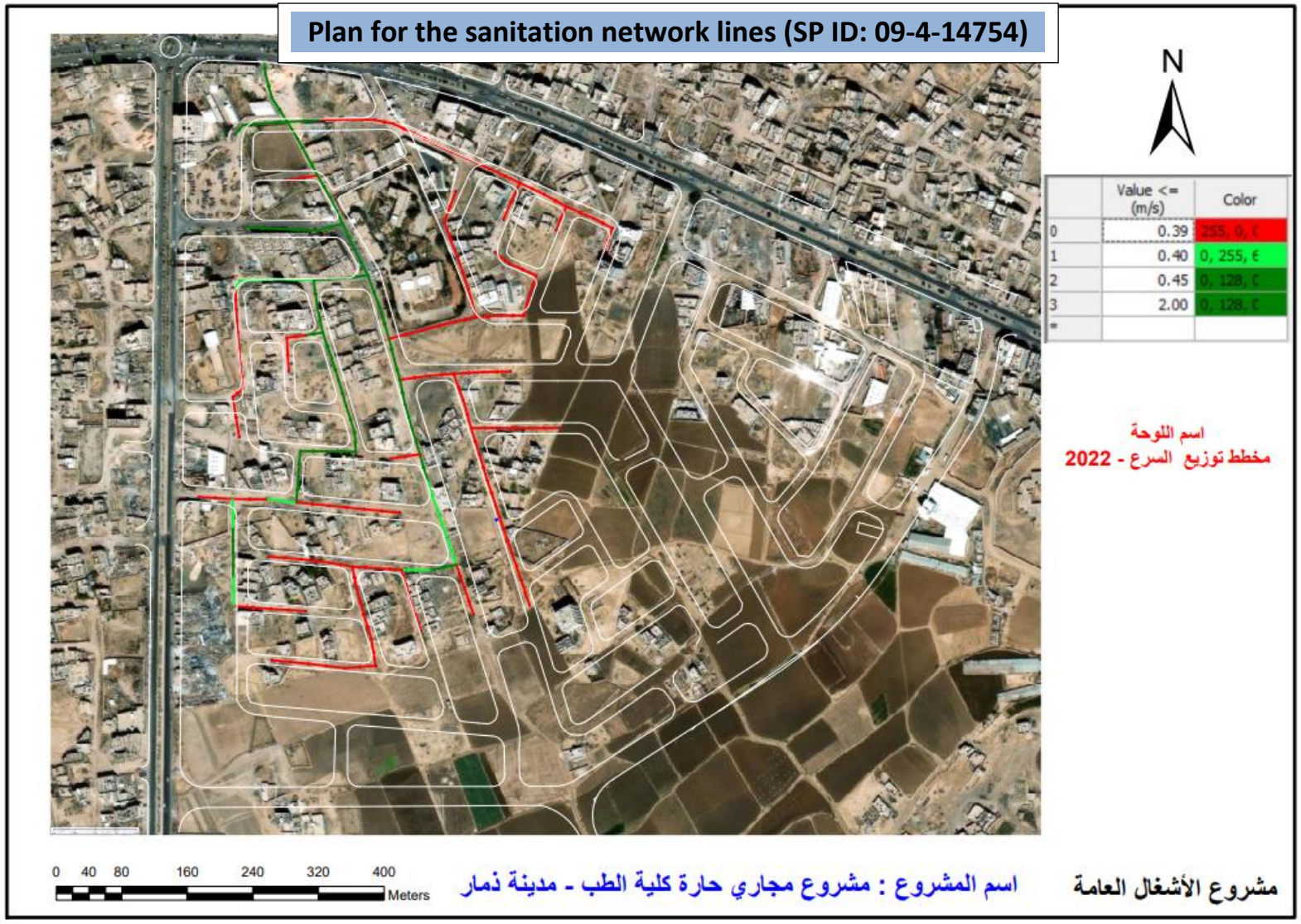
2-2 Location:

The subproject will be implemented in Dhamar governorate, as shown in table 3 and figure 2. The land formation in the targeted areas is rocky, semi-rocky, clay, sandy, and graduated soil. The discharge of sub-project will be to the existing manholes that are available in the city and designed and implemented previously to connect any extension to them.

Coordinates of the Location:

Governorate	Subproject-ID	District	E (Y)	N (X)
Dhamar	09-4-14754	Medical College neighborhood – Dhamar	14.542109°	44.415909°

Table 3: subprojects coordinate



Sanitation network for Medical College neighborhood – Dhamar- as red represent UPVC -200mm, and green represent UPVC -150mm

Figure 2 Sub-projects Maps Locations

3 Environmental and Social Baseline conditions:

Yemen is divided geographically into four main regions: the coastal plains in the west, the western highlands, the eastern highlands, and the Rub' al Khali Desert in the east. The benefits of this sub-project include protecting the urban areas from environmental pollution, raising the income of beneficiaries, and raising the health situation in the areas which are applicable for the sanitation network interventions to be implemented. The sub-project will be implemented in Dhamar governorate.

Dhamar Governorate is located to the south of the capital Sana'a, about 100 kilometers away. The population of the governorate is about 1,603,000 persons accounting for 6% of the total population of Yemen. Administratively, Dhamar Governorate has 12 districts and Dhamar city is the capital of the governorate.

The targeted neighborhoods in Dhamar are made up of soil and rocky streets. These neighborhoods have service facilities and integrated infrastructure but without a sanitation system. 45-50 % of the sewage disposal system is using cesspits around their houses. They connect the house sewage system to these cesspits and when they get saturated and full, they dig new ones. Some citizens bring sewage suction trucks to suck the cesspits when they get full, but this is a very costly process and not all citizens have the capacity to do that.

Based on the current main system of the city, which consists of a sewage network with a length of about 165,000 meters and a wastewater treatment plant with a capacity of 11,000 m3/day, it was estimated by the Local Water Supply and Sanitation Corporation (LWSSC) that WWTP received an influx of up to 6200 m3/day. As a result of the new construction (about 350 new house connections), sewage influent will increase to 188 m3/day, bringing the total to 6,388 m3/day. The current system will be capable of covering the expansion of the new network. The targeted area is located inside the city where the agricultural activities and animal husbandry are very limited, and the activities focus on the trading and some of the people are government employees or in the private sector. it has limited traffic as it is residential areas, and there are no markets or hospitals. most of the of 350 new connected houses/buildings are one floor, made of brick cement mortar, and plastered with cement mortar. The intervention site has no surface water, no biologically sensitive zones, important plant areas, important bird areas, wetlands, marine areas, or archaeologically significant areas in the area.

3.1 Hydrology:

The sub-project will be located on existing streets, so there is no change in the runoff patterns, and the sanitation network will not lead to a blocked change in rainwater runoff paths, no wadis, or major water drainage areas will be diverted or blocked and no downstream communities will be impacted. Additionally, there are no groundwater tables and main surface water paths in the targeted areas and no water wells.

3.2 Cultural Heritage:

The districts where sub-project is located do not encompass any known archaeological sites as well as there is no site within the cultural heritage areas in the city. The subproject is located at a limited scope which is away from any heritage sites.

3.3 Rainfall, Climate, and Weather:

The climate of Yemen can be described as a subtropical dry, hot desert climate with low annual rainfall, very high temperatures in summer, and a big difference between the maximum and minimum temperatures, especially in the inland areas. The rainfall is characterized by seasonally intense and short-lived heavy storms that often lead to flash floods. Heavy rainfall is frequently followed by long

dry periods. Although high year-to-year variability makes it difficult to detect a trend in precipitations, the summer total appears to have declined across the Yemen Highlands, although local data for Yemen are lacking, and there are inconsistencies between data sets.

The average annual rainfall is less than 200 mm although the high mountain areas, where the population is concentrated, receive about 250-400 mm and more, with peaks of 1000mm in the highlands. Surface water is taken from wadis during floods mainly in two rainy seasons, March-May, and July – September. Rainfall has generally a bimodal pattern with two rainy seasons, the first is from March-May, and the second is from July to September which is the heaviest rainy season.[8]

3.4 Climate change:

Climate change poses a significant threat to Yemen's development across many sectors. Challenges include Short-burst and intense rainfall which often leads to flash floods, which can result in significant damage and high losses in urban areas due to their concentrated physical assets and population. Rainfall intensity, and therefore flooding, is projected to increase with climate change; Greater rainfall variability could result in prolonged drought periods. Yemen's water crisis ranks among the worst in the world, and water stress is observed to be increasing, with groundwater reserves likely to be mostly depleted in two to three decades regardless of climate change.

3.5 Air Quality and Noise:

Data on air and noise quality in Yemen in general and in the areas within the sub-project are extremely scarce. No air and noise quality monitoring data for the subproject areas were found.

3.6 Existing Situation of the Targeted Areas:

The targeted area is dense population center with a large number of lanes and a high-traffic. They have service facilities but without a sanitation system. The current sewage system is using the dug cesspits around their houses. With time, the cesspits get filled up and overflow into the streets which leads to environmental pollution and the streets turn into swamps which makes the people's movement very difficult especially during the rainy season. Consequently, diseases are more likely to spread such as cholera and other diseases, making the population more susceptible to diseases and epidemics. Also, as a result of the overflow of sewage from the cesspits to the streets, the communities do repeat suctioning using sewage suctioning trucks which this process is very costly and the people in the targeted areas live in poor conditions, and most of the local communities are unemployed.

The intervention will reduce the communities' suffering and provide a cleaner environment and enhance the living conditions in the targeted areas. Moreover, the intervention will reduce the outbreak of Cholera and other waterborne diseases. Below are some photos from the targeted areas explaining the current situation:

[8] There is no specific rainfall, climate, weather data specific for the targeted locations, due to absence of weather stations in the specific locations, hence General data has been utilized.

Sanitation network for Medical College neighborhood – Dhamar

Figure 3 Existing Situation of the Targeted Areas

3.8 Targeted Beneficiaries:

The interventions are selected based on the communities' highest priorities[9] and in line with sectors for famine / COVID-19 response. The activities of the subproject will serve the local community that is considered the project's direct beneficiaries. Table 4 below shows the total number of beneficiaries segregated by gender:

Subproject -ID	District	Benefited houses/buildings	Beneficiaries		
			Male	Female	Total
09-4-14754	Medical College neighborhood – Dhamar	350	1,920	1,843	3,763

Table 4 Total number of beneficiaries segregated by gender

During the planning phase of the sub-project and prior to handing over the site to the contractor, the PWP sub-area manager invites the beneficiaries' representatives to participate in this occasion. The beneficiaries' representatives could be the head of the community committee, local council members, district managers, or any entity representing the beneficiaries. The site handing over ends with minutes of subproject handing over between the PWP sub-area manager and the contractor with the signing of the beneficiaries' representative. During this occasion, the sub-area manager makes awareness to the attended beneficiaries about the importance of the sub-project maintenance to ensure the sustainability of the intervention.

[9] According to the local communities' public consultations and stakeholder engagements.

Through the transparent allocation of funds that is based on national statistics indicators at the governorate and district levels, followed by coordination with local actors and an inclusive participatory process, PWP will be reducing conflict over resources. The selection of the community beneficiaries is based on national statistics indicators at the governorate and district levels, followed by coordination with local actors and an inclusive participatory process. Before implementation and during the participatory consultations with local communities to define the interventions, PWP's teams confirm the priority of the need of the society and ensure the need for the intervention for the society.

4 Environmental and Social Impacts Assessment:

4.1 Applicability:

The World Bank Environmental and Social Framework ESF and YEHCP ESMF have been applied because this subproject may trigger some environmental and social impacts.

4.2 Eligibility (Responsive Criteria and Exclusion List):

This subproject is eligible for support as per the PWP Environmental and Social Responsiveness (ESR) Criteria- see Annex 3, and UNOPS Exclusion List at the Proposal Stage below:

Exclusion List

#	Statement	Yes	No
1	Production or activities involving harmful or exploitative forms of forced labor/harmful child labor;		X
2	Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements;		X
3	Production or trade in weapons and munitions;		X
4	Gambling, casinos and equivalent enterprises;		X
5	Trade in wildlife or wildlife products regulated under CITES;		X
6	Production or trade in radioactive materials;		X
7	Production or trade in or use of unbonded asbestos fibers;		X
8	Production or trade in wood or other forestry products from unmanaged forests;		X
9	Production or trade in products containing PCBs;		X
10	Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals;		X
11	Production or trade in pharmaceuticals subject to international phase outs or bans;		X
12	Production or trade in pesticides / herbicides subject to international phase outs or bans;		X

13	Production or trade in ozone depleting substances subject to international phase out;		X
14	Production or activities that impinge on the lands owned, or claimed under adjudication, by indigenous peoples, without full documented consent of such people;		X
15	Power plants;		X
16	Large-scale transport infrastructure such as highways, expressways, urban metro-systems, railways, and ports;		X
17	Investments in extractive industries; commercial logging;		X
18	Dams, or projects involving allocation or conveyance of water, including inter-basin water transfers or activities resulting in significant changes to water quality or availability;		X
19	Activities that would significantly convert natural habitats or significantly alter potentially important biodiversity and/or cultural resource areas;		X
20	Activities that would require the relocation of residential households and/or significant involuntary land acquisition; or		X
21	Activities in disputed areas.		X

4.3 Environmental and Social Screening:

An Environmental and Social screening has been conducted by PWP safeguards, field staff, and designer engineers through site visit to subproject's site, on June ,2022. The subproject will have a positive impact on the environment and communities in the targeted areas such as providing Job opportunities during implementation for workers from local communities in different sectors such as economy, education, and health services in the targeted area, and will enhance the community's protection and resilience.

Based on the screening, the subproject may trigger moderate environmental and social impacts such as air and noise pollution, residual wastes, hazardous waste, raw materials, and OHS issues. The intervention does not require land acquisition as they will be implemented on existing public properties such as roads and streets. Also, the civil works may cause temporary disruption of economic activities, including disruption of traffic and congestion, and may bother the civilians by traffic jams due to the movement of vehicles from/to worksite and transporting of materials so the alternative streets will be available for streets' users during implementation. PWP will coordinate with local authorities and communities to avoid this impact and the activities will be implemented section by section to avoid restriction of access and interruption of traffic. There will be a risk of Covid-19 spread among workers and may transfer to the local communities from the exported workforce from outside the community within the same city. Financial exploitation including bribes, fraud or some other form of corruption is also an important risk that may happen during the intervention between beneficiaries and contractor and/or resident engineer.

In such intervention, minor and moderate injuries may occur during the subproject's activities even for the workers or the local communities. The main activities that people may be harmed from are excavation works, working in confined spaces during the works inside the closed manholes, providing temporary steel

pedestrian bridge (for crossing trenches with protected sides to prevent falling), welding works, manual handling of works materials, traffic accident, and using of such equipment in the workplace like asphalt cutting, cement mixer, trucks, excavators, … etc. PWP will ensure OHS measures are in place including conducting a risk assessment of all activities to measure the impacts on the safety of workers and communities.

In terms of environmental impacts, it is expected to have some pollution during the activities even from workers or from the work activities, for instance, open defecation and solid waste produced by workers (trash and plastic bags) or by residual excavation and construction wastes and rubbles, which accumulates and pollutes the environment. Also, very limited air pollution, loud noise, and gas emission may be generated by machines and vehicles. Soil contamination because of excavation activities and construction materials such as epoxy, and hazardous wastes "sludge" and sewage as well as from oil change of vehicles and equipment in the worksite. Moreover, vibration impact is anticipated due to compaction activities.

The sub-project of sanitation network will be located on existing streets, so there is no change in the runoff patterns, and the sanitation network will not lead to a block or change in rainwater runoff paths, no wadis, or major water drainage areas will be diverted or blocked and no downstream communities will be impacted. Additionally, there are no groundwater wells and main surface water paths in the targeted areas. Thus, there will not be any anticipated impacts on the hydrology system in the targeted areas. PWP will ensure the slope in the sanitation network will be as per the slope designs, and after backfilling of trenches the slope will be returned as the existing design of the streets slope to avoid any change in the hydrology system.

During the site visits, it is noticed that the subproject will be implemented in very dense areas and inside the internal lanes where the children are present and pedestrians. Accordingly, impacts on community health and safety are anticipated. So, PWP will ensure community health and safety measures are implemented and coordinate with the public, and local authorities before implementing any activities, disseminate the project established grievance mechanism, and raise public awareness regarding the potential risks and impacts as well as secure the excavations and activities locations from the children and pedestrians. Additionally, the required mitigation measure to avoid any impacts on the building and houses will applied as mentioned in the mitigation measure table.

PWP will ensure adding the mitigation measures, as listed in section 5 of this ESMP, in the tender documents to ensure proper management of the environmental and social aspects as well as occupational health and safety. Moreover, the contractor code of conduct, list of environmental and social requirements, and contractor liabilities have been prepared and added to the subproject bidding documents to ensure full adherence to the environmental and social requirements. Specific training for contractor has been designed and assigned for each contractor before starting the implementation. In addition, the Contractor will submit the Contractor ESMP depending on this ESMP which needs to be reviewed and cleared by PWP before project activities begin

PWP will monitor the environmental and social issues during the implementation of the sub-project with the support of the community committee which will be involved in the monitoring, as well as following up on the complaints system to ensure that all complaints are received, reported, and resolved quickly.

4.3.1 Environmental and Social Screening Form

Question	Answer		ESS relevance	Due to diligence/ Actions
	Yes	No		
Does the sub-project involve civil works including new construction, expansion, upgrading, or rehabilitation of existing infrastructure?	X		ESS1	ESMP, SEP
Does the sub-project involve the land acquisition and/or restrictions on land use?		X		ESMP, SEP
Is the sub-project associated with any external waste management facilities such as a sanitary landfill, incinerator, or wastewater treatment plant?	X		ESS3	ESMP, SEP
Does the sub-project have an adequate system in place (capacity, processes, and management) to address waste?	X		ESS1, ESS3	ESMP
Does the sub-project involve the recruitment of workers including direct, contracted, and primary supply?	X		ESS2,	LMP, , ESMP
Does the sub-project have appropriate OHS procedures in place and an adequate supply of PPE (where necessary)?	X		ESS2, ESS4	LMP, ESMP
Does the sub-project have a GM in place, to which all workers have access, designed to respond quickly and effectively?	X		ESS10, ESS2	SEP, LMP
Does the sub-project involve the use of security or military personnel during the construction and/or operation of healthcare facilities and related activities?		X		ESMP, SEP
Does the Sub-project establish and implement an appropriate quality management system to anticipate and minimize risks and impact that services may have on community health and safety?	X		ESS4	ESMP, SEP
Does the sub-project apply the concept of universal access were technically and financially feasible?	X		ESS4	ESMP, SEP
Is the sub-project located within or in the vicinity of any ecologically sensitive areas?		X		ESMP, SEP

Is the sub-project located within or in the vicinity of any known cultural heritage sites?		X		ESMP, SEP
Do the sub-project area present potential Gender-Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risk?	X		ESS1, ESS10, ESS2, ESS4	ESMP, SEP, LMP

4-4 Land Acquisition:

Land acquisition refers to all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property, and acquisition of access rights, such as easements or rights of way. The land acquisition may also include:(a) acquisition of unoccupied or unutilized land whether or not the landholder relies upon such land for income or livelihood purposes; (b) repossession of public land that is used or occupied by individuals or households; and (c) project impacts that result in land being submerged or otherwise rendered unusable or inaccessible. “Land” includes anything growing on or permanently affixed to land, such as crops, buildings, and other improvements, and appurtenant water bodies.

The interventions do not require land acquisition as they will be implemented on existing public property[10] such as roads and streets. There are no squatters, or other informal users along the alignments where the works will be implemented. Moreover, PWP reached social agreements[11] with targeted communities and local authorities to implement these subprojects.

4-5 Resources and Services' access restrictions:

The subprojects will be implemented on the existing streets and roads which will cause temporary restrictions on the services and resources. Therefore, PWP will ensure the activities will be conducted section by section and each section excavation will be implemented between the distance of two or three manholes maximum with around 150 meters and will require three to four days to close the section, and alternative roads[12] will be available for road users during implementation. PWP and the contractors will coordinate with local communities and local authorities to ensure the subprojects will not limit access to the services and resources. Additionally, dissemination of project grievance mechanism is key to solve any complaint about access restriction.

4-6 COVID-19 Sensitivity

Due to the outbreak of COVID19 in Yemen, the proposed subproject will be at the risk of COVID-19. Therefore, the COVID-19 control measures have been applied during the consultation process with targeted

[10] There is not any land donation expected at any sub-project site, as per the current design.. Public property means no one owns it, and the local authorities only have the right to give permits to work on it, such as streets.

[11] The social agreement include that the local authorities and the community committees ensure that there is no land acquisition in the targeted sub-project, and if these occur during the implementation, they are the ones who are responsible for solving the argument with the one who claimed the ownership. Also, they are the ones who are responsible for any compensations if needed in such situation. Otherwise, PWP will exclude the intervention. Also, the agreement mentioned that PWP will conduct the studies and civil works and the local authorities will facilitate the work of the engineers and contractors in the field. Moreover, the local authority accepted the intervention in the appointed site specified in the technical study. In addition, the local authorities agreed to continuously present in the subproject site during the implementation period to know the components of the intervention that will help in knowing the required operation and maintenance. The local authorities committed to use the subproject according to what is designed for.

[12] The subproject will not cause restriction for the services and resources, during implementation PWP and contractor are responsible for coordination with beneficiaries to avoid road blockage.

communities such as distribution of masks, providing hand sanitizer, and maintaining a distance of at least 1.5 meters between consulted people (social distancing). Moreover, the COVID19 precautionary measures including face masks, hygiene kits, soap, clear water, and hygiene etiquette will be available in the subproject's site during the implementation as well as social distancing in the worksite. Furthermore, awareness sessions will be conducted for workers and communities regarding COVID19 risks.

4-7 Gender and Social -related issues:

Both males, females, were considered beneficiaries when designing the sub-project. The sub-project will highly contribute to improving the living standards of about 3,763 people including women, men, and their children. The interventions will generate positive impacts on livelihoods and the beneficiaries.

4.7.1 Child Labor:

No child labor will be hired for these activities. The minimum age of work has been specified in the tender documents for contractors. Verification of legal documents is done before starting the work. The minimum accepted age is 18 years old and verification of age by checking IDs and other available documents will be strictly applied. A labor log will be kept, and all workers will be registered. Additionally, no forced labor will be used, and the contractor will be obligated and monitored to implement the LMP.

4.7.2 Gender:

PWP has ensured gender equity in the subproject's cycle as a core principle for the subproject's success. PWP is mainstreaming Gender in all aspects of the subproject's cycle as well as raising awareness amongst the communities both males & females on Job opportunities during subproject implementation[13]. The total number of targeted beneficiaries for the sub-project is **3,763** including women, and men. PWP has engaged and involved the beneficiaries in the consultation process to ensure their concerns and feedback are taken into consideration without any discrimination.

The consultation was conducted with 55 males and **29** females. Also, PWP established the community committee in the targeted area by sending the social consultants' team (male and female) and conducting focused groups discussion including women and men to enable participation in the process of electing the community committee members. The elected community committee and their members including women and men participated in the decision-making, need assessment, and public consultation. Also, they will participate in the monitoring of implementation, receiving the subprojects, as well as operation and maintenance.

The number of elected community committees is **1** committee for the sub-project, and the number of their members is **3** males and **2** females. PWP conducted **one** training and awareness-raising, on 22,February 2022, for consulted beneficiaries and community committees on GBV, SEA/SH, COVID 19 and other diseases prevention measures, and health & hygiene. This also includes using the GRM to report any gender-based violence, gender discrimination, SEA, and SH cases with the highest level of confidentiality and anonymity of complaints (more details in GBV Action Plan)[14]. Furthermore, the Gender & Social Specialist will hence direct its activities to attain the PWP principles regarding gender, most importantly mainstreaming gender and

13 Mostly in the activities relate to sanitation networks the Yemeni women do not to participate as a workforce because of the type of the activities that hard for women to participate in . From the PWP side, it is our procedure to give the women an opportunity to participate if she has the willingness to engage in such works. For example, woman can participate as supervisor engineer … etc.

14 https://drive.google.com/file/d/16zn-_Ng3WYDFVJmalz7pW-wVQiHxwpC7/view?usp=sharing

equal participation into the subproject cycle phases and creating job opportunities. Table 5 below provides the figures on Subproject's beneficiaries, public consultations, and community committee per gender.

Subproject ID	Beneficiaries			Public Consultation			Community Committees		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
09-4-14754	1,920	1,843	3,763	55	29	84	3	2	5
Total	**1,920**	**1,843**	**3,763**	**55**	**29**	**84**	**3**	**2**	**5**

Table 5 Subprojects' beneficiaries, public consultations, community committees per gender

4.7.3 Gender-Based Violence "GBV", and Sexual Exploitation and Abuse "SEA":

Based on the screening process, the sub-project may generate such kinds of gender-related risks including discrimination against women during the implementation, different kinds of abuse towards the beneficiaries, and risks related to GBV, SEA, or SH. PWP raised the awareness of community members, both men, women, and disabled people regarding GBV & SEA during the public consultation process as well as raising community awareness on GRM processes and how they can be used to report gender-based violence, gender discrimination, and SEA/SH cases with the highest level of confidentiality and anonymity of complaints. O**ne** training and awareness-raising session was conducted for **55** males and **29** females as well as for members of elected community committee both male and female. To ensure effectiveness, repeated mandatory awareness training and sessions about refraining from unacceptable conduct towards local community members, specifically, women will be performed by PWP through the supervisor engineer and subarea staff for the contractor and workers. This also includes informing workers about the national laws " Criminal Penalties Act" that make sexual harassment, abuse, and gender-based violence a serious and punishable offense.

4.7.4 Conflict sensitivity and Do No Harm

PWP has its conflict sensitivity manual to manage any conflict cases during the project cycle. Conflict sensitivity is given high priority and integrated into decision-making criteria in project approval. PWP adopts specific approaches when targeting the beneficiaries and defines their prioritization. Targeted communities provide their consent, acceptance, and satisfaction with the chosen intervention. No concerns were raised by the communities against the subproject. Public consultation included ensuring conflict sensitivity screening. In case of conflicts that cannot be resolved, the sub-project will be rejected. Also, Conflict sensitivity is taken into consideration in the monitoring and reporting processes during the implementation. Furthermore, the elected community committees are trained to manage, monitor, and report any conflict that might be generated during the project cycle. Generally, the subproject will help to build the resilience of the communities and improve their living conditions positively.

5 Environmental and Social Impact Analysis Plan and Mitigation Measures:

5.1 Environmental and Social Management Plan[15]:

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
Construction	Children are pushed by their families to work due to the need for money	- Ensure child labor is not permitted; all workers are 18 Years old and above -Verifying age by checking IDs and other available documents. -Ensure a Labor Log is available, and all workers are registered.	Contractor/ Resident Engineer / Community Committee	N.A
	Sexual harassment, abuse, gender-based violence, and discrimination	-Mandatory and repeated training and awareness-raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women. -Informing workers about national laws that make sexual harassment and gender-based violence a punishable offense that is prosecuted. - Contactor and its workers to understand in culturally appropriate language and sign the Code of Conduct. -Raise awareness of the GRM system and how it can be used to report any GBV cases	Contractor/ Resident Engineer / Community Committee / Gender Focal Point	N.A
	Discrimination against women and persons with disabilities when selecting beneficiaries	PWP adopts a non-discrimination policy that ensures a non-discriminatory and inclusive manner, including women and persons with disabilities when selecting subprojects. The policy also ensures the inclusion of women in community committees as well.	PWP Subarea Staff/ Community Committee / Gender Focal Point[17]	Mandatory

[15] All the ES mitigation measures are obtained based on WB ESF and WB EHS sector-based guidelines for water and sanitation. The requirements of the ESMP will be included to the contractors' bidding documents as specific specifications, items in BoQ, and ES instructions, guidelines and the mitigation measures tables as attachments. Additionally, a C-ESMP will be submitted to PWP for agreement.

[16] During Construction Phase, the contractor is responsible for implementing the mitigation measures. PWP field staff/ supervisor engineer is responsible, monitoring and reporting on ensuring mitigation measures are implemented. During O&M phases, the Local councils and the Beneficiary Committees are responsible for O&M.

[17] The Gender Focal Point is responsible for conducting Public Consultation, ensuring women participation in the selection of subproject, consensus on the subproject, site location, establishing Community committees including women representatives, resolving complaints related to GBV, SEA issues and monitoring during construction phases. PWP staff participate in the public consultation, discuss details, raise awareness on SEP, and discuss stakeholder concerns vis a vis the subproject community committee's formation and collection of community data / profiles. Community committee is responsible for raising the awareness between society, helping in solving problem and obstacles, accordingly, supporting the monitoring in sites and helping to solve GRM complaints in site as possible.

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
Construction	Lack of workers' awareness and knowledge on respecting local community cultures, and social safeguard issues on Gender, SEA/H, and GBV.	- Contactor and its workers to understand in culturally appropriate language and sign the Code of Conduct. - Ensure workers respect and adherence to the Code of Conduct CoC for the local community's protection and not harm. - GM system in place to handle any issues on Gender, SEA/SH, and GBV.	Contractor/ Resident Engineer / Community Committee / Gender Focal Point	N.A
	Financial exploitation of community or beneficiaries	- Inform the beneficiaries that the subproject is provided for free, and they should not pay anyone to get benefits of the subproject. -Raise awareness among PWP consultants and resident engineers that there is zero tolerance for any cases of financial exploitation. - Raise the awareness of the community committee, workers, and communities on the GM system and how it can be used to report any financial exploitation -Inform consultants, resident engineers, and the community about PWP regulations that make financial exploitation a serious contravention.	PWP / Community Committee	N.A
	COVID-19 spread causing illnesses	-Ensure adherence to COVID-19 precautionary measures by all workers. -Ensure face masks are available and used by all workers. -Ensure awareness sessions are conducted on COVID-19 with all workers. -Ensure availability of hygiene kits, soap, clear water, and hygiene etiquettes are followed. -Ensure social distancing is applied on the worksite.	Contractor/ Resident Engineer	$ 500 for each subproject
	No latrines near the project site and workers may have to practice open defecation.	- Renting house with a latrine that discharge into existing cesspit linked to the sewerage network. -Maintain good housekeeping in rented house and cesspit. -Ensure the cesspits are properly covered.	Contractor/ Resident Engineer	$200 for each subproject/ month

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
Construction		-Ensure soap and water are always present in rented houses with latrines -Ensure any domestic waste is disposed of at designated areas - For women labor, as there are mostly from the same area of work, they use their latrines in their houses. - From a cultural and traditional point of view, even women labor coming from the remote area would use the latrine of the houses of the women labor living in the same subproject area.		
	Damage to the utilities and services located underground (electricity, water, telephone, etc.)	- Coordination with local authorities and locating service lines before starting work. - Get detailed drawings of underground services. - Before starting drilling, manual drilling is applied to avoid damaging the underground infrastructure. - The area that will be scanned for underground services and allowed to be obtained from the relevant government institutions before starting work. -Ensure contractor repairs in a timely manner any services or houses that were damaged/ destroyed during implementation. - Ensure grievance mechanism clearly visible on signs at the project sites	Contractor/Resident Engineer	N.A
	Suction and Backfilling of cesspits	1. Ensure to suck the cesspits before the excavation of pipes lines. 2. Use of suction trucks that are authorized by local authorities and ascertain the safe storage and disposal of the sewage to the treatment plants designated by local authorities. 3. Storing sewage away from runoff zones and isolated from the ground 3. Ensure to not backfill the cesspits until connection is established between the house and the new sewage network to avoid the sewage disposal to the streets.	Contractor/Resident Engineer	N. A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		4. Backfilling the cesspits after opening them directly and avoiding any delay. 5. Coordinate with house owners before backfilling their cesspits and raise their awareness about required procedures during this process. 6. Ensure the required protection for the houses' foundations during backfilling the cesspits. 7. Ensure community and workers' safety during the opening and backfilling of the cesspits. (Fence around the opening, install the warning signs, ensure a safe distance for workers from the edge while working close to them, and ensure to avoid the collapse of the cesspit's roof and sides. 8 - Contractors to avoid any damage to the houses and building in the area and assess the building before the excavation and other activities. 9 - Provide the required shelters and side supports during excavation works to avoid any collapse to the houses' foundations.		
	Air pollution due to dust from activities	-Spray the work area with water regularly to reduce the dust. Ensure water management throughout the spray process as follows: 1. Water sprayed will be done efficiently to avoid wasting water. 2. Using rainwater collected, if possible, in water spraying activities 3. Use dust sweeping methods to avoid wasting water in dust suppression -Ensure workers wear masks. -Material loads must be suitably secured during transportation to prevent the scattering of soil, sand, materials, or dust[18].	Contractor	BOQ Items. Mandatory (Contractual Obligation)

[18] WBG General EHS Guidelines as good practice references are used during the implementation as Guidelines.

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		-Exposed soil and material stockpiles must be protected against wind erosion and the location of stockpiles shall take into consideration the prevailing wind direction. 4. Use well-maintained equipment. 5. Covering trucks that transport construction materials. 6. Properly maintain construction machinery to minimize suspended particulates emissions. 7. Avoid leaving truck, vehicles and machinery idling In the critical areas where dust is emitted in the populated areas, inform locals to close windows and distribute masks to people nearby. - Ensure grievance mechanism clearly visible on signs at the project sites		
	Gas emissions are generated from machines and vehicles.	Maintain machinery in good working conditions to minimize emissions including exhaust emissions of CO, NOx, and fumes Provide adequate protective wear for workers, and equipment must be maintained regularly to avoid any emissions. Offer good practice awareness to workers to turn off vehicles and machinery when not in use	Contractor	N.A
	Loud noise and severe vibration are caused by machines and vehicles.	Measures to reduce noise to acceptable levels must be implemented and could include silencers, and mufflers. Avoiding or minimizing transportation through or processing material in community areas (like concrete mixing). Machinery must be maintained regularly to avoid exceeding noise emissions from poorly maintained machines. - Limit noisy activities to normal daylight hours. - Limit vehicle speed at critical locations. In the narrow streets in neighborhoods, use small machines and equipment to avoid vibration on buildings. -Ensure grievance mechanism clearly visible on signs at the project sites	Contractor	N.A
	Soil contamination and ground water contamination	- Properly store all types of waste and hazardous chemicals (paints, oil, etc, used PPEs in manholes, etc.) if any in	Contractor/ Resident Engineer	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		insulated areas to avoid spillage and away from runoff areas. - Ensure cesspits are properly covered to avoid rainwater penetration and soil contamination with sewage. - Ensure oil change or mixing cement is done at designated insulated areas away from the soil, water areas, and drains. - Ensure hazardous chemicals and waste including sludge, are stored, handled, and disposed of according to their Material Safety Data Sheets. - Construction waste should be stored and handled in designated areas away from the soil and water runoffs and from any surface water zones - Avoid working during rainy seasons. - Ensure fuel storage sites if present is properly insulated and away from runoff areas.		
	Impacts by vibration due to compaction and maintenance machinery equipment	- The Contractor should utilize manual activities inside the neighborhood. - Use small equipment.	Contractor/ Resident Engineer	N.A
	Climate change	Tree planting using native non-invasive species is a positive Environmental improvement measure. The contractor will deliver the plants from local Nurseries for native trees, and the numbers of trees/saplings will differ from site to another as per the site engineer's recommendations. The location of tree planting will be as suggested by Project engineers with distance more than 5 meters from pipelines. -Trees planting shall be done at locations where there is no risk that the roots will affect the sewerage network. - Maintain machinery in good working conditions to minimize emissions. - Offer good practice awareness to workers to turn off vehicles and machinery when not in use. - Reducing the number of transport vehicles and distances and increasing transportation efficiency.	Contractor/ Resident Engineer	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
	Probability of an archaeological discovery during the activities	- Ensure to stop the work in the discovery area and inform the Antiquities Authority and the local authority. - Ensure that seizing any archaeological items and deliver them to the Antiquities Authority with an official report. - Ensure that awareness sessions are held for all workers on the importance of archaeology and to report for any archaeological items that are found during the implementation of project activities.	PWP/ Contractor/ Resident Engineer / Community Committee	N.A
	Solid waste produced by workers (trash and plastic bags) accumulates and pollutes the environment	- -Ensure that workers regulatory collect all solid trash in well-insulated bags and transport them to the designated landfill or dispose of it in a proper way that does not impact the environment through a certified contractor or at an authorized area - Waste management procedures will be added to the tender documents to ensure proper management of waste in the worksites.	Contractor/ Resident Engineer	N.A
	- Hazardous materials/waste	- Ensure proper storage of hazardous materials and wastes. Any potentially hazardous materials or wastes will be stored, handled, and disposed of according to their Material Safety Data Sheets. - Ensure that hazardous wastes (i.e., oil containers, etc.) are properly stored and insulated away from drainage areas and runoffs, managed, and disposed of safely and legally. - -Ensure the presence of spill prevention kits if possible. - -Ensure workers do not spend long exposure times to chemicals - -Ensure hazardous wastes and materials are handled by trained workers	Contractor/ Resident Engineer	N.A
	The low aesthetic value of the landscape such as damage to existing trees on the median island, accumulation of waste and debris	- Plant new trees and replant those damaged and dry	Contractor/ agricultural office in the city /Resident Engineer	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
	on the median island, and damaged curbs and tiles.	trees in the median island[19] from the same type used in each street.[20] - Take care to trees from the beginning of the project. - Remove the accumulated waste and debris in the maintenance site and median island. - Reconstruct the damaged curbs and tiles. - Sites must be cleaned when repairs are completed.		
	Public safety during activities implementation	- Restrict access to the working site (administrative control, communicating risks and fencing) - Protect and the working site by proper fence to prevent intruders into the working site - Install warning signs - Erect removable barriers in high-risk areas		N.A
	The road traffic may temporarily be interrupted during implementation, impeding people from accessing their needs.	- The beneficiaries and the community committee of the project have discussed the need to temporarily block the main road during implementation and the necessary arrangements to provide alternative sub-roads for pedestrians to mitigate the impact of the temporary suspension of the road. install temporary bridges to ensure that people have access to their homes and businesses (across trenches). - Coordinate with local councils and the public on the implementation schedule. - Disseminate the project GM in project site. - Shorten works period. - Avoid complete closure to the streets by doing maintenance in sections. - Accelerate the maintenance activity and open the site as soon as possible by doubling workers and	Contractor/ Resident Engineer / Community Committee	N.A

19 median island is the island (partition) with trees which divided streets into lanes

20 the planted trees will be responsibility of the contractor during the implementation and after implementation the local council handed the responsibility to the agriculture office in the city in this kind of SPs.

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		equipment. - Do Road maintenance in sections.		
	Temporary disruption of economic activities, including disruption of traffic and congestion Temporary disruption of access to the home, due implementation process	- Ensure closure of street sections will not cause income loss to roadside businesses, kiosks, or vendors by providing alternative access to residences and roadside businesses. - Activities are to be conducted sections by section in a manner to avoid any disruption to people's daily routine. - Coordinate with the public on the activities implementation time and inform them previously to avoid any delay or disruption. - Never disturb citizens from access to homes, markets, and daily subsistence zones; - Provide alternative temporary access to homes, markets, and daily subsistence zones. - Install temporary bridges to ensure that people have access to their homes and businesses (across trenches) - In residential areas where dust and odor are emitted, inform locals to close their windows and distribute masks to nearby people. - Organize the site to let person living with disabilities can travel safely during works	Contractor/ Resident Engineer	N.A
	Traffic jams due to the movement of vehicles from/to worksite and transporting of materials	- Before construction, the contractor should carry out consultations with local authorities and the community and effectively and widely disseminate the project GM. Vehicle trips must be included in a construction plan before approval. Routings, especially heavy vehicles, need to take into account sensitive sites such as schools, hospitals, and markets. It is strictly forbidden to transport materials for construction during rush hour. - Coordinate with the traffic authority in the City on the	Contractor/ Community Committee	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		maintenance schedule. - Disseminate the project GM in project site. - Find alternatives (detours) to either side of the existing road before excavating and reconstructing existing road surfaces. - Control and manage traffic, by arranging detours and alternate bypasses for traffic and roadside residences & businesses for each maintenance site by using traffic cones, barriers, fences, or lights as appropriate with coordination with traffic officers and according to the work plan conducted by the Contractor and approved by PWP. - Do not start any maintenance activities before the installation of traffic safety and control safeguards. - Install signs to detour were necessary to guide the driver to follow. - Where required, allocate persons to direct traffic in areas where construction is taking place. - Park the machines and equipment away from the streets in an area allocated for.		
	Public Health includes risks of public access to the worksite.	- Install fences, barriers, and dangerous warning/prohibition sites around the construction area which show potential danger to the public people. - Place appropriate warning and directional signs at areas where construction is taking place. - Keep road surfaces clear from materials such as soil and gravel. - Ensure this is adequately communicated during consultations and coordination with the relevant communities - Limit in coordination with traffic authorities the movement of heavy vehicles on roads/lanes used by the public during traffic peak hours.	Contractor/ Resident Engineer	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		- Conduct management and safety plans for maintenance activities. - Erect removable barriers. - Protect proper shielding scaffolds. - -Ensure construction work is carried out during the daylight - -Ensure maintaining noise and air quality mitigation measures - - Be sure to identify the locations of the ground services extensions and coordinate with the relevant authorities to provide the plans and their delegates to come to the site and put signs on them before starting the excavation work. - Facilitating the safe passage of people, especially those with special needs, to their homes by install temporary bridges to ensure that people have access to their homes and businesses (across trenches) - . Alert road users and local communities about excavation risks. - Provide the excavation where the people pass through with crossing points (steel pedestrian bridges) and its gangway is provided with guardrails and toe boards to protect people from falling into the excavation. Before drilling begins, perform manual drilling to avoid damaging the underground infrastructure.		
	Waste accumulation of soil excavation.	- -An appropriate mechanism was agreed upon for the management of waste resulting from the excavation to be transported to pre-designated areas. Dust residues that may be produced are moved to the designated areas - Properly collect, transport, and dispose of solid waste and hazardous waste at designated permitted sites or landfills identified by the local authorities and cleaning	Contractor/ Resident Engineer	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
		funds. - ensure that no earth spoils are left in the street after works. - Transfer waste/sludge and sediment to a proper site permitted by Water and Sanitation authorities mostly WWTP to be treated or landfill to be disposed. Properly covering trucks that transport collected waste to avoid spillage during transportation. - Attach the waste receipt from the relevant landfill authorities. - Use well-maintained equipment to avoid leakage in the street. - Oil change and maintenance work must be done in designated insulated areas to avoid soil contamination outside of residential areas. - Avoid working during rainy seasons - The Contractor's staff should be trained in waste handling.		
	Rainwater stagnant after the rain session because of the inadequate slope of the road after the excavation for the sanitation network.	Leveling and surveying should be conducted by the total station to guarantee the drainage of the stormwater and no flooding of water during the rainy season in the targeted areas.	Contractor	N.A
	Changing the oil of vehicles on the worksite	- Oil change and vehicle maintenance and fueling should be done in designated areas that are well insulated to ensure no leakage on soil - - Keeping an oil spillage kit on site - - Oil and other hazardous materials should be properly stored and handled and their residues (i.e containers) should be properly disposed of or sell them as reused oils. - Oil change should be carried out by trained workers	Contractor	N.A
	Risks related to inadequate	- Hold public interviews to address concerns/comments	Contractor, PWP	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
	communication and consultation with affected communities and inefficient GM..	about construction and bypass issues; - Inform public/beneficiaries before activities commencement about GRM; - Install an on-site, identification stand, containing how to communicate GRM. - Ensure that Complaint forms are available on the site. - GRM should be established by the Contractor and PWP with multiple uptake channels - Inform the public about GRM contact information and the method of submitting complaints; - Details of complaints received should be incorporated into the audits as part of the monitoring process and respond to settle the complaint quickly and accordingly. - personnel to be trained as needed to handle adequately and in a timely manner the grievance and follow the required reporting lines and to inform the WB in the event of incidents within 48 hours		
	Labor influx related risk	- Offer employment opportunities to locals; - Sensitization of communities on employment opportunities. - Mandatory and repeated training and awareness-raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women, and children. - Inform workers about national laws that make sexual harassment and gender-based violence a punishable offense that is prosecuted; - Introduce a Worker Code of Conduct as a part of the employment contract including sanctions for non-compliance (e.g., termination) - Raise awareness of the GRM system and how it can be used to report any GBV cases.	Contractor/ Resident Engineer / Community Committee	N.A

Project phase	Potential Impact Factor	Mitigation Measure	Personnel / Institution Responsible For Execution[16]	Estimated Cost/each SP
Operational phase	Maintenance of sewer network and related activities	- Raise public awareness of the avoided actions that lead to blocking the sanitation network. - Inform the public of maintenance times. - Handing the sub-project to the respective local authorities. - Sign an agreement with local authorities on the maintenance requirements.	Community committee, Local Authority	Mandatory

2- The occupational health and safety plan for Sanitation Networks

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
General Requirements (OHS general actions for all activities of the sub-project)	- (General): Conduct comprehensive training about occupational and health safety (OHS) aspects before the beginning of the sub-project implementation by PWP this includes (hazards associated with the activities, mitigation measures, and workers' responsibility as well as disciplinary action against any violation. - (General): Weekly repeated awareness sessions on OHS hazards associated with the activities, mitigation measures, and workers' responsibility as well as the disciplinary action against any violation. - Conduct daily toolbox talks for workers. - Prepare a Permit to Work (PTW) for the activities of the moderate and high-risk. - (General): Ensure control of the risk on the site to protect workers from hazards and risks. - (General): Workers sign that they have received awareness about the implementation of the activity, and that they understood risk assessments that help mitigate, minimize, and avoid potential risks. - (General): Ensure the necessary personal protective equipment (PPE) is always worn by workers and they get it for free. - (General): Involving the community committee in the monitoring of safety procedures and reporting any risks. - (General): Emergency response plan to be in place with details of the nearest hospital or medical center, responsibilities are understood for all works, first aid boxes are available and a list of trained first aiders is posted and known by all workers. - (General): in case activities at height take place, provide safety ropes for workers and fall protection devices. - Ensure effective monitoring of the worksites including inspections and spot checks to ascertain compliance with OHS measures. - Conduct regular inspections for any unsafe acts, near misses, or accidents. - Discover the root causes of any non-compliance cases or/and accidents occurring and suggest corrective actions to avoid reoccurring. - Wear high rubber boots to protect from snake bites - Ensure no work is conducted during bad weather conditions (i.e., sandstorms, dust storms, rainy seasons, etc.) - Ensure workers are trained on handling cement and are aware of its health hazards. Additionally, ensure that workers handle and store cement according to its MSDS. - Using gunpowder is prohibited in all activities and interventions.			
Excavation work	- Workers and pedestrians fall from the edges of excavation zones.	- The issuance of a work permit by the resident supervisor allows the	Contractor/ Resident Engineer	provide safety

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
	- Destroying sides, slipping soils during drilling excavation, or slipping digging waste on workers during the excavation process. - Vehicles fall into excavated areas - Injury of hands or feet during excavation in rock or semi-rock areas using a manual or mechanical digger. - Fly dust, sand, and particles during excavations or construction work. - Injury to the parties when using drilling or drilling equipment. - Exposure to the burning sun during excavation works causes headaches and psychological and neurological disorders. - Misuse of equipment for excavation or waste removal and other works.	commencement of work. - Organizing awareness sessions in the field of occupational health and safety before starting work, including the risks of collapses, and to be documented. - Ensure that drilling workers understand special procedures that help avoid and mitigate potential risks. - The workers certainly signed that they received the necessary awareness about the implementation of the activity and that they absorbed special procedures that help mitigate and reduce risks and avoid potential risks. - Preparing the site and organizing material to ensure the safety of workers at work - Conduct inclined excavation if the soil is collapsible or saturated with water. - Support the sides of the excavation with timbering or steel that is adequate to protect the excavation sides from collapse as per the international specifications. - Use appropriate equipment for leveling and drilling and pay special attention while using the mechanical excavators to cut or remove rocks. - Maintenance of drilling equipment before starting work to ensure that it is in good and safe working condition - Remove falling blocks or sliding soil in any area high on excavations, in and around the excavations. Adding banners and warning signs in the drilling areas. - Provide guards in drilling areas to prevent		equipment for workers and excavation side supports 5000 $, for each subproject

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		road users from accessing drilling. - Alert road users and local communities about the dangers of drilling. - Isolating and securing the work area appropriately using barriers and fences - Daily maintenance of the drilling fence to ensure its proper installation. - Ensure that excavation waste is collected and transported to the landfills designated for that in a regular quick manner. - Providing gloves and masks to prevent dust, protective helmets, protection shoes and all personal protection tools to mitigate the risks of carrying out the activity and it is worn on the job site at all times. - - Place the soil from the excavations at a location far from the edges by 0.80 meters to avoid falling again within the excavated area - Ensure that the excavation walls are strengthened by the usual means, according to the classification of the site and the soil and its characteristics. - Ensure that there are safe entrances and exits to excavations. Ensure that drilling equipment is as far as possible from the edges of excavations. - - Be sure to control traffic and walk away from excavations if any. - Ensure that an emergency plan is in place to respond to any accidents or emergencies.		

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		- Ensure that excavation features are identified with barriers. - Design Traffic and vehicles routes away from excavation areas. - Collecting and transporting the excavation residues to the landfills allocated by local authorities. - Conduct additional inspection for excavation works before starting the work to observe the worksite, ensure the safety procedures in place, and approved the permit to work. - Removed all objectives, equipment, materials, and sliding soil from the areas surrounding excavations and at least 2 m from the edge to avoid falling into the excavation. - Use of ladders for access and egress from the excavation. - Allow regular breaks and ensure presence of potable water - Avoid working in extreme weather conditions (sandstorms, dust storms, rain etc.)		
- Work in confined spaces (manholes)	- Workers' ignorance of safety hazards at the work site. - Suffocation due to work in confined spaces such as rainwater collection manholes. - Injury/death - lack of oxygen; toxic gases	- Workers working in confined places must have a work permit approved by the person in charge. - Ensure the safety of the air surrounding the confined areas before each entry and measure oxygen and toxic gases concentrations and provide adequate lighting, and provide the necessary tools and devices such as a respirator, hydrogen sulfide meter, safety belts, helmets and	Contractor/ Resident Engineer /Workers	Provide gas Detector and oxygen cylinders: 3000 $

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		paws ... etc., - Provide self-contained breathing apparatus (Air cylinders) to all workers when working in the confined spaces such as manholes or storm water drainage canals; - Ensure presence of extra oxygen tanks - Provide full-body harness and lifelines and gas detectors when working in the confined spaces (Sewer manholes) or canals; - Ensure no worker spends too much time in confined areas - Ensure the presence of extra air breathing apparatus - Ensure all workers in manholes or confined areas are attached with safety ropes to be pulled away in case of emergency. - Make sure that a person is assigned to monitor the safety of all activities of access to confined places. - Develop a plan and provide training in access to confined areas. - An emergency response plan must be developed with details of the nearest hospital or medical center. All workers understand responsibilities, first aid boxes and a list of trained paramedics are available and are known to all workers, providing on-site transportation.		
Traffic safety	- People or workers struck by moving vehicles.	- Conduct as much work as possible during low traffic periods - Emphasis safety aspects among drivers	Contractor/ Resident Engineer /Workers	N.A

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
Movement of people and vehicles in the worksite. **Movement of work equipment including Tracks, Excavators, and Compactor.**	- Likely traffic accidents (collision) between moving vehicles. - Falling workers from vehicles during moving. - Falling vehicles from the road edge. - Falling vehicles into excavations.	- inform drivers on local speed limit, and monitor implementation - Coordinate with local authorities to provide and manage alternative road for smooth traffic if required - Control and manage traffic, by using traffic cones, barriers, fences, or lights as appropriate - Daily inspection and maintenance for the vehicles by the contractor to ensure they are in good condition prior to start the work. - Provide traffic signs in the worksite, especially for speed limits, routes directions, parking places, entrance and exits, pedestrians' walkways, and worksite warnings signs. - Warning signs for vehicles should be added at a safe distance from work site to warn drivers to slow down prior to reaching the work area - Stop the movement of vehicles in worksite in bad weather conditions to avoid collision. Provide the worksite with barriers in the road edges to protect workers and vehicles from falling. - Arrangement and control of the worksite entrance and exits, and not allow for unauthorized person or vehicles enter the worksite. - Coordinate with local authorities and communities to provide alternatives road for road users during closing the worksite. Provide the vehicles in the worksite with		

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		audible reversing alarms and flashing beacons. - Prohibit workers to climb on the vehicles during moving to avoid falling.		
Work Equipment and machinery: **- Using Asphalt cutter -cutting mechanical equipment.** **- Hand tools for excavation and other activities.** **- Using of a manual loading cement mixer to prepare concrete in the worksite for manholes casting.**	- Injuries in hands and feet due to using of hand tools like hammers, and chisels. - Injuries in legs and feet during using of the small compactor. - Eyes get injuries during cement mixer. - Workers fall while standing to cut or walk on them. - Improper use of equipment while excavation which causes injuries. - Serious injuries may occur during the operating of the equipment or cement mixer when workers contact with moving parts which may cause entanglement, drawing in, cuts, wounds, burns, or tears. - Breaking legs or hands when sharing or putting between two moving parts. - Hearing injury while using mechanical equipment cement mixer. - Serious injuries may occur due to contact the power source of equipment. - Fire or explosion from petrol (fuel) which may cause fatality.	- Maintain the cutting and cement mixer equipment to ensure they are in good condition. - Provide storage place in the worksite to ensure good storage for the machinery and equipment in the end of the day. - Check the used cutting equipment and cement mixer if they are in a complaint with the relevant standard. - Issuance of a special permit to work before using cutting equipment and cement mixer to ensure health and safety procedures in place. - Ensure the moving parts in the equipment are provided by a fixed guard to avoid contact with dangerous moving parts. - Ensure use of ear protection (ear plugs) for anyone near noise generated for cement mixer. - Ensure the power source of equipment is isolated, protected from water, placed away from pathways, and safe connection. - Ensure the fuel storage tank in the equipment in perfect condition to prevent explosions during working. - Avoid using equipment in confined spaces because of emissions of exhaust gases.	Contractor/ Resident Engineer /Workers	N.A

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		- Train the workers at a safe distance from moving parts like the rotating drum of a cement mixer to avoid injuries. - Monitor the operation of equipment during all working times on the equipment to ensure safe procedures are in place and stop any dangerous acts with equipment directly. - Prohibit the use of untrained workers and use restricted to trained operators only. - Locate the cement mixer equipment on firm level ground to avoid collapse during operation and locate it away from traffic.		
Risk of Lifting Activity	- Hazards related to the loads, e.g., crushing due to impact of moving objects or loads falling because they are not aligned properly, or the wrong type of slings were used - Hazards from cranes falling over because of improper fixation or strong wind, unsafe loads, loads exceeding the safe weight limits, trapping/crushing risk in the use of MEWPs while working at height, falling from height - Hazards related to poor environment that may interfere with communication between workers or concentration needed for the task (noise) or cause sweaty, slippery objects (heat, poor ventilation) - Contact with overhead electrical	- Fence the lifting area to prevent unauthorized access during lifting; - Install warning Signs in lifting activities site; - Carry out lifting work by well trained, qualified, and certified lifting team; and provided means of communication and flagman; - Provide workers with all necessary Personal Protective Equipment (PPE) and safety materials; - Use well-maintained equipment for lifting that are appropriate for the weight; well checked and tested by a third party; - Secure loads when lifting and use strong and reliable fixation materials to make sure that the load is well tighten and no solid parts falls from the load during lifting; - Protect the units against staining, discoloration and other damage until they	Contractor/ Resident Engineer /Workers	N.A

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
	cables. - Risk of High wind speed, Poor communication and poor visibility	are installed in their final location. - Lifting device capacity shall be 1.65 times the maximum calculated static load at that point. - An ultimate load shall be ≥ 4 times the maximum static load. - Ensure to coordinate with local authority on areas with electricity grids/networks and cables in order to avoid electrical shocks - Prohibit working during rainy periods		
Manual Handling	- Risk of heavy, Bulky or unwieldy load - Risk of Unstable/ unpredictable loads - Risk of PPE clothing hindering the movement or posture - Risk of poor communication on safety between workers - Risk of workers back injuries due to wrong manual handling.	- Avoid the need for manual handling as possible. - Reduce the load risk by using lighter weights or more stable containers. - Organize the activity to further reduce the impact on the individual(s). - Utilize mechanical lifting aids or equipment as appropriate. - Ensure appropriate rest breaks, job rotation, and training are involved. - Provide personal protective equipment (e.g., gloves, foot protection, and non-slip footwear). - Provide training for workers on handling and storing any hazardous substances and materials.	Contractor/ Resident Engineer /Workers	N.A
Mixing the concrete for manholes casting	- Serious injuries due to contact with cement mixing equipment while working. - Cracks on the hands due to the effect of the chemical component of cement during mixing and direct contact with liquid cement.	- - The issuance of the permit to work by the resident supervisor, allowing the commencement of work. - Organizing awareness-raising workshops in the field of occupational health and safety before starting work. - The use of the professional workforce to	Contractor/ Resident Engineer	N.A

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		carry out mandatory activities while mixing and pouring concrete. - Use wind gloves while loading, transporting and distributing of sharp materials like iron bars during construction. - - Long rubber safety shoes and piles should be worn while mixing concrete on site. - Ensure that concrete mixing equipment is in good condition. - - Workers are aware of the dangers of concrete mixing equipment and maintaining a safe distance during its movement and rotation. - - Locating cement mixing equipment on fixed level ground to avoid collapse during operation, and to move away from traffic. - Ensure that an emergency response plan is in place to respond to any accidents or emergencies.		
Supply and installation of sanitation pipes	- The load on workers or equipment falls - The load collides with construction around the work area - Crane coup - Strong winds and poor vision - Burns from hot surfaces, flame, sparks, hot flying metal fragments, etc. - Eye and face injuries from volatile molecules, molten metal, gases, or chemical fumes	- - Issuing the permit to work by the resident supervisor, allowing the start of work. - Organizing awareness-raising workshops in the field of occupational health and safety before starting work. - The use of the professional workforce to carry out mandatory activities - - It must be ensured that the lever is above fixed and flat ground - Install the hydraulic supports for the lift truck and make sure it is at least one meter away from the drilling area	Contractor/ Resident Engineer	N.A

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
	- Falling while working on the stairs. - Exposure to high levels of noise. - Lung diseases caused by inhalation of fumes, which are a complex mixture of mineral oxides. - Wounds and injuries from the sharp metal edges. - spark, flame or hot metal fires	- Stopping lifting when the wind or heavy rain blows - Weights must not be raised, which are more than 75% of the truck's ability to lift - Fencing the distance of the crane wrap and preventing entry to the site from unauthorized persons - Ensure workers are at safe distance from the crane - Wearing phosphorous jackets at all times - Any movement under the loaded materials must be prohibited under any circumstances - - The truck should have a warning sound when going back - - Organizing awareness about occupational health and safety before starting work, including risks related to activities, risk mitigation measures, or worker responsibility and disciplinary measures against violators. - - Putting an emergency plan into practice that includes details related to the nearest hospital or health center, and that everyone understands their responsibilities related to all work, provides a first aid fund and a list of people who are able to provide first aid and place it in a prominent place that all workers on the site see - Wear heavy fire-resistant leather gloves to protect hands, wear an apron to protect the body and clothes, and wear a welding helmet permanently with UV protection. - Check the stairs before boarding. Not to		

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		climb on an unstable ladder or a ladder with slippery degrees. - Suitable ear protection equipment (ear plugs / ear cover) should be used. - Use cutting-resistant network gloves or injuries in all work using sharp knives or other sharp objects. - Ensure that flammable materials are stored in safe containers away from the work area, and ensure that the fire extinguisher is close to the workplace		
Poor coordination, planning	- Risk of rain flood.	- Conduct awareness sessions about (OHS) occupational and health safety includes (hazards associated with the activity, mitigation measures, and worker's responsibility as well as disciplinary action against any violation. - Regular break to workers and provision of clean water to workers - Workers sign that they have received awareness about the implementation of the activity, and that they understood the special procedures that help mitigate, minimize and avoid potential risks. - Ensure the necessary personal protective equipment (PPE) is always worn by workers and they get it for free.	Contractor/ Resident Engineer	N.A
Dealing with hazardous material and waste	- Skin and eye irritation and allergies from hazardous material handling. - Diseases and contamination from used manhole PPEs	- Store hazardous material and waste according to their MSDSs - Hazardous materials and wastes should be handled by trained workers. - Workers should be provided with proper PPEs including proper breathing apparatus against epoxy, cement and oxygen tanks	Contractor/ Resident Engineer	N.A

Risk mitigation measures	Hazard	Tasks with risk possibilities	Responsibility	Cost ($)
		for workers working in confined areas such as manholes. - Workers should spend very limited time with chemicals or in confined areas with hazardous emissions.		
Hazards risks	- Disease to workers related to sanitation works.	- Control mosquito breeding sites and invasive aquatic communities - Use of proper care protective clothing and equipment. - Use heavy-duty rubber gloves and boots and clothes to prevent skin contact with wastewater and sludge. - Remove contaminated clothing after job completion. - Shower at work and change into clean clothes and shoes. - Wash hands with soap and water before eating or smoking and whenever hands contact wastewater and sludge. Care for cuts and abrasions promptly. - Prevent eating, drinking and smoking in the site - Provide proper clean water source and clean toilets at the working site - Carryout regular medical test for workers.	Contractor/ Resident Engineer	N.A

Table 9 Occupational and Health Safety Plan

6 Environmental, Social, and OHS Clauses and Liabilities for Contractors:

The ES and OHS conditions are the indicators that PWP will build on to select the eligible contractor for the ES requirements while the ES and OHS clauses are the measures and instructions that will be included in the bidding documents to ensure contractor obligations during the implementation.

6.1 Conditions for the Eligible Contractors:

1. Provision of adequate and suitable equipment for the activities of the subprojects
2. A financial capability that ensures the subprojects will be executed and completed as per agreed terms and conditions.
3. Provision of insurance policies for the workers as a condition of signing the contracts.
4. The OHS tools should be provided with acceptable quality according to the BOQ with conducting training for the workers. These materials should be conditional for the handover of the site to the contractors.
5. Contractors are fully responsible for any accident or incident that may occur
6. Contactor's strict compliance with the ban on the use of explosives.
7. Contractors and contractors' site representatives have undertaken OHS training and are fully aware of the risks, mitigation measures, and responsibilities.
8. Contractors should abide by the principle of non-discrimination in all aspects of employment.
9. Banning the use of explosives should be enforced and monitored.
10. The contractor will be terminated if they do not comply with the E&S and OHS mitigation measures during implementation.
11. Contractors shall ensure compliance with the Code of Conduct

6.2 Environmental and Social Clauses for Contractors:

The contractors shall supply and execute the necessary works on-site to mitigate the environmental and social impacts of the subproject in accordance with the bidding and contractual E&S requirements. Each contractor will be responsible for following a specific contractor-ESMP that will be included to their bidding documents[21] as specific specifications, items in BoQ, and ES instructions and guidelines as attachments. The Environmental and Social Clauses for Contractors should at least reflect the following but not exhaustive items:

1. Worker Health and Safety:

   To avoid work-related accidents and injuries, the contractors will:

   1.1 Provide occupational health and safety training on a regular basis to all employees (including the community worker if any) involved in the works.

   1.2 Provide protective masks, helmets, gloves, overalls and safety shoes, and safety goggles, breathing apparatus as appropriate.

   1.3 Provide workers in high noise areas with earplugs or earmuffs.

[21] both bidding documents and works contracts will include specific clauses laying out contractor responsibilities including their responsibilities for compliance monitoring

1.4 Ensure availability of first aid box and ensure that at least one person trained in first aid is always available on-site.
1.5 Provide employees with access to toilets and potable drinking water and soap, separate for both males and females.
1.6 Train workers regarding the handling of hazardous materials and storing and managing hazardous materials

2. Labor Management Plan:

The estimated / planned number of labors for this one sanitation subproject is 173 which (35%) 58 skilled and 115 (65%) unskilled labor during the project life in which the expected life project contracts will eight months. The contractors are responsible on:

2.1 Wages and Deductions: The contractor shall be in line with the current market rates paid for skilled, semi-skilled, or unskilled labor. Also, the daily rates could differ from one governorate to another; hence, they should be equivalent to the wages paid in the specific location. On the other hand, community workers should be paid similar to the contracted workers. PWP field staff shall monitor and ensure the contractor pays all workers based on market rates in the area.
2.2 Child Labor and Forced Labor: Ensure all workers are 18 Years old and above, and no child, forced[22], involuntary or unpaid labor will be used in any work.
2.3 Labor influx: The contractor should use workers from the local communities as much as possible. Some parts of the activities include special works that require skilled labor, these tasks must be undertaken by appropriately skilled workers from the targeted areas and when not available, the contractors may hire skilled laborers from nearby areas. Workers are from the nearby areas so the workers will be able to return to their homes daily after finishing their work time.
2.4 Gender-based Violence (GBV)/Sexual Exploitation and Abuse (SEA)/Sexual Harassment (SH): The contractor and its workers should understand and sign the Code of Conduct (CoC) to be prepared in the culturally appropriate language and ensure workers respect and adherence with it for the local community's protection and do no harm. Ensure that workers respect local community cultures, and social safeguard issues on Gender, SEA/H, and GBV. Raise awareness of the GRM system and how it can be used to report any GBV cases.
2.5 Community Health and Safety: The contractor shall protect the local communities from any risks that might be generated during the implementation including exposure to the virus (COVID-19) and as mentioned in the OHS plan above.
2.6 Occupational Health and Safety (OHS): The contractor shall maintain occupational health and safety system on the site to protect workers from hazards and risks and provide adequate health and safety training[23], required PPE, first aid box, toilets, and potable drinking water, and as mentioned in the OHS plan above.

[22] All work or service which is exacted from any person under the threat of a penalty and for which the person has not offered himself or herself voluntarily.
[23] This project will be implemented by national / regular contractors. However, the contractor will be responsible for providing training and PPEs for each worker

2.7 Overtime Work: The contractors shall provide workers basic wages per hour of overtime on normal working days and on the day of weekly rest, and official holidays and leave, in addition to the entitlement to standard wages for such holidays according to the Yemeni Laws.

2.8 Gender and Social Inclusion: Contractors to adopt a non-discrimination in job opportunities during the implementation to ensure a non-discriminatory and inclusive manner, including women, as mentioned in the Environmental and Social Management Plan.

2.9 Training of workers: PWP staff and Contactors shall provide the workers with required training and daily toolbox talk in the OHS, GBV, SEA, GRM, and as mentioned in the Environmental and Social Management Plan.

2.10 Addressing worker grievances: Contactors shall provide the worksite with a GM system for all workers (community and contracted workers) including providing the complaints box and the project board with complaint means. The mechanism will also allow for anonymous complaints to be raised and addressed. Ensure that workers are aware that grievances will be handled positively. Contractors, resident engineers, and community committees are trained to handle grievances positively.

3. Supply and implement roadblocks and traffic signs to prevent the entry of non-workers to work sites (zinc - timber - concrete blocks - warning tapes - traffic signs) and ensure this is adequately communicated during consultations and coordination with the relevant communities
4. Conduct work section by section and keep enough access to spaces on both sideways open and clear from any materials for continuous access of pedestrians, residents including disabled persons in the targeted sub-streets sections.
5. Conduct work of sanitation network by trained and skilled workers and ensure the work with full supervision.
6. Assign a permanent safety supervisor to follow up on the implementation of an environmental and social management plan as well as OHS requirements during the implementation of work activities at the site
7. Apply a safety work permit system[24] for all working activities at the site to ensure full implementation of ESMP and OHS requirements.
8. Supply of personal safety equipment and tools including boots, helmets, gloves, goggles, masks, earplugs, safety belts, air-breathing apparatus, full-body harness, etc. in quantities enough for all laborers at the expense of the contractors and ensure the adherence of using by all.
9. Provide first aid boxes in the worksites (as per the emergency response plan) which contain (adhesive plaster of different sizes - –sterile gauze - scissors – disinfectant- forceps - etc.).
10. Provide a contingency plan containing the names and numbers of the nearest health center and local assistants, the routes to be used, and the means of transport.
11. All necessary PPEs and COVID protection gears required for the job are distributed to each worker who will be participating in the implementation.
12. Ensure adherence to COVID-19 precautionary measures and social distancing are applied on the worksite and hygiene kits (water and soap) are available.

13. Provision of water for these bathrooms and or trenches with covers and obliging all workers and supervisors to use them.

[24] A work permit is a permit that gives the contractor approval to begin carrying out the activity specified in the permit after reviewing the risks and control procedures for this activity.

14. Separate the material and store them accordingly and provide enough space for movement and maneuvering.
15. Removal of all waste during the implementation period to a dedicated location outside the work area (allocated landfills) and following the instructions of the consultant.
16. Commit to placing disturbing equipment away from populated places, not at accessible zones for the community, nor at sensitive zones and watercourses, and operating them at the appropriate times.
17. Commit to storing hazardous materials away from workers and not to change oils or leave grease residue in the work area.
18. Commit to the repair of public services (electricity, telephone, water, sewage) that are broken during the implementation of the project.
19. The Contractors shall coordinate with the competent authorities to regulate the traffic in the streets and shall not start work in any street until the completion of works in other streets to facilitate movement.
20. Report immediately any accident or injury occurring during the execution of the work and within a maximum period of 24 hours.
21. Conduct awareness sessions about OHS before the beginning of work by the contractors this includes hazards associated with the activity, mitigation measures, workers' responsibility, GRM, sexual harassment, abuse, and gender-based violence as well as the disciplinary action against any violation.
22. The contractors shall adhere to the use of the Permit to Work system (PTW) for all activities and ensure all workers are aware of the system.
23. Contractors must address the risk of gender-based violence, through:
    Mandatory and repeated training and awareness-raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women.

    23.1.1 Informing workers about national laws that make sexual harassment and gender-based violence a punishable offense that is prosecuted.
    23.1.2 Introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for non-compliance (e.g., termination)
    23.1.3 Adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender-based violence.
24. Contractors must not employ workers below the age of 18 and must ensure verification of documents is conducted before hiring.
25. Provide proof of health and life insurance for all laborers, including the third party, before the implementation of the project.
26. Commit to not use any type of explosive materials for the excavation required for the project or any reverent works.
27. Movement of Trucks and Construction Machinery: The Contractors moving solid or liquid construction materials and waste shall take strict measures to minimize littering of roads by ensuring that vehicles are licensed and loaded in such a manner as to prevent falling off or spilling of construction materials. This could be done by sheeting the sides and tops of all vehicles carrying mud, sand, other materials, and debris. Construction materials should be brought from registered sources in the area and debris should be transferred to assigned places in the landfill with a documented confirmation.
28. Traffic Safety Measures: The Contractors shall provide, erect, and maintain such traffic signs, road markings, barriers, traffic control signals, and other measures as may be necessary for ensuring traffic safety around the site. The Contractors shall not commence any work that affects the public motor roads and highways until all traffic safety measures necessitated by the work are fully operational.
29. Gas, Noise, and Dust Control: The Contractors shall take all practicable measures to minimize nuisance from noise, vibration, and dust caused by heavy vehicles and construction machinery. This includes:
    - Respecting normal working hours in or close to residential areas

- Maintaining equipment in a good working order to minimize extraneous noise from mechanical vibration, creaking, and squeaking, as well as emissions or fumes from the machinery.
- Shutting down equipment and trucks when it is not directly in use.
- using operational noise mufflers
- Provide a water tanker and spray water when required to minimize the impact of dust.
- Limiting the speed of vehicles used for construction.
- Environmental training on machinery efficiency, the importance of maintenance, transportation efficiency, and good practice usage of machinery to mitigate impacts from dust, gas, noise, and climate change.

30. Protection of the Existing Installations: The Contractors shall properly safeguard all buildings, structures, works, services, or installations from harm, disturbance, or deterioration during the concession period. The Contractor shall take all necessary measures required for the support and protection of all buildings, structures, pipes, cables, sewers, and other apparatus during the concession period and will be required to repair any damage that may occur, in coordination with the Municipality and the relevant authorities.
31. Working in rainy seasons is not allowed where there is a risk of flooding, and endangering workers or equipment.
32. Environmental training on machinery efficiency, the importance of maintenance, transportation efficiency, and good practice usage of machinery to mitigate impacts from dust, gas, noise, and climate change

OHS related to works in the confined spaces (Manholes)

33. Applying confined spaces work permit system when working in the closed stormwater drainage systems;
34. Implement gas indicators and required ventilation to ensure the absence of toxic or harmful gases during working in manholes or closed water storm drainage systems/canals;
35. Provide self-contained breathing apparatus (Air cylinders) to all workers when working in the confined spaces such as manholes or stormwater drainage canals;
36. Ensure the presence of extra air breathing apparatus.
37. Ensure workers spend very limited time in confined areas
38. Provide full-body harness, lifelines, and gas detectors when working in the confined spaces (Sewer manholes) or canals;
39. Fencing the work site area by zinc to ban any non-authorized people from getting into the work area
40. to not hand the subproject site unless enough fence and excavation sides support are available in the subprojects sites.
41. A storage yard should be available and the work's materials should be organized according to OHS regulations and the supervisor engineer's instructions.
42. A protected site from sunshine and rainfall is provided for pipes and cement
43. Spray water during backfilling
44. In the old cities and beside old buildings, and narrow streets, use a small compactor with low vibration or a hand compactor.
45. The contractor should fully comply with all instructions; otherwise, according to the contract documents, suitable sanctions should be applied depending on the severity of the expected risk from this noncompliance, such as alert, final alert, and terminating the contract.

Other OHS related to sanitation activities

46. Periodic inspection to ensure the safety of stairs before and during work
47. Make sure that the asphalt cutting equipment is in good condition and safe to use.
48. Materials are stored and arranged in the workplace and ensure that the road is not blocked, traffic is obstructed or that risks are caused to passers-by and workers.
49. - The use of explosives is strictly prohibited, and the contractor is responsible for non-compliance in the subprojects sites.
50. Applying Occupational health and safety regulations
51. Ensure the availability of gas detectors in the workplace and their efficiency for use.
52. Use safety gloves while dealing with or running sharp objects or adhesives.
53. Wear safety shoes during the implementation of closures and lay iron rods.
54. Wearing long rubber safety shoes is mandatory while mixing and pouring concrete.
55. Ensure the safety of the air surrounding the confined areas before each entry and measure oxygen and toxic gases concentrations and provide adequate lighting, and provide the necessary tools and devices such as a respirator, hydrogen sulfide meter, safety belts, helmets, and paws
56. The slabs supporting wood used should be in excellent condition, in addition to the supervising engineer's assurance of the quality of the proper support work with wood or iron.
57. Locate cement mixing equipment on the flat fixed ground to avoid falling during operation and to stay away from traffic

6.3 Environmental and Social Liabilities for Contractors

Contractors will be legally and financially accountable for any environmental or social damage or prejudice caused by their workers and it is thus expected that controls and procedures are put in place to manage environmental and social performance. These will include:

- Mitigation measures to be included in the contract will be specified in the subproject bidding documents.
- Deductions for environmental noncompliance will be added as a clause in the Bill of Quantities (BOQ) section.
  - The contractor should fully complain with all instructions; otherwise, according to the contract documents, suitable sanctions should be applied depending on the severity of the expected risk from this noncompliance, such as alert, final alert, and termination of the contract.
- Environmental and social penalties shall be calculated and deducted from each submitted invoice.
- Any impact that is not properly mitigated will be the object of an environmental/social notice by PWP.
- Any action from the perspective of PWP is severing and can cause a huge impact on the occupational health and safety, in the environment or the social aspects, PWP has the power to terminate the contractor's contract, but the contractor in the black list, and Warranty confiscation.
- For minor infringements and social complaints: if an incident occurs, that causes temporary but reversible damage, the contractors will be given the notice to remedy the problem and restore the environment. No further actions will be taken if the PWP project engineer confirms that restoration is done satisfactorily.

- For social notices, the PWP project engineer will alert the contractors to remedy the social impact and to follow the issue until solved. If the contractor does not comply with the remediation request, work will be stopped and considered under no excused delay.
- If the contractors have not remedied the environmental impact during the allotted time, the PWP will stop the work and give the contractors a notification indicating a financial penalty according to the non-compiled mitigation measure that was specified in the bidding document. No further actions will be required if that restoration is done satisfactorily. Otherwise, if Contractors have not remedied the situation within one day any additional days of stopping work will be considered no excused delay.
- In the event of repeated non-compliance totaling 5% of the contract value, the Project Engineer will bring the environmental and social notices to the PWP procurement to take legal action.

7 Environmental and Social Monitoring Plan:

The implementation of the mitigation measures will be monitored through daily checks by the resident engineers, biweekly by the OHS/SES staff at the branches as well as monthly visits by PWP subareas managers and the regular TPM and UNOPS field monitoring visits. The following aspects will be monitored (though the list will keep updated to accommodate any emerging issues or updated aspects that may be recommended by the monitoring reports):

Action	Indicators	Responsible[25]	Timeframe
Contractors and their workers are aware to respect the local community's protection and do no harm.	100% of contractors, and their workers signed on to the Code of Conduct CoC The number of complaints received.	PWP Safeguard/ Contractor/ Resident Engineer/ Gender Focal Point	Before commencement of work
Adherence of contractor to permit to work system for activities as identified by the risk assessment[26] and ensuring all safety measures for the task are in place	Number of permits issued for activities	Contractor/ Resident Engineer/ PWP safeguard	Daily as required
All OHS requirements for the subproject are identified and available in the place.	Incorporating OHS requirements into project documents. Number of incidents	Subarea Staff Resident Engineer	Within one week before commencement of work
	Signboard with GRM contact details in place	Subarea Staff Resident Engineer	Within one week before

- [25] The indicators are shared between the Responsible agencies, some of them are the responsible for implement the action and others are responsible for monitoring the actions' implementation according to the level of the position.
- [26] Risk assessment should be undertaken once in the project cycle and when its required as when we have new activities in the subprojects or when a sever accident happened, in which the risks and their mitigation measures should be attached with sub-project documents.

Action	Indicators	Responsible[25]	Timeframe
Knowledge of the local communities, a community committee, and workers about the GM, as well as the contact numbers.			commencement of work
	Provide one complaint box, the number of awareness-raising and brochures distributed.	Subarea Staff Resident Engineer	Bi-weekly
Local communities and workers aware of the safety requirements are conducted	Number of awareness sessions for communities and workers	Resident Engineer	Weekly
Regular awareness sessions to communities, a community committee, and workers about the use of GM	Number of awareness sessions for communities and workers	Subarea Staff Resident Engineer Gender Focal Point	At the onset of subprojects and regularly
Regular awareness sessions to communities, a community committee, and workers about the historical value of the worksite and the importance of reporting any archaeological discoveries	Number of awareness sessions to communities, a community committee, and workers about archaeological discoveries management procedures	Subarea Staff Resident Engineer Antiquities Authority	Before commencement of the work
Occupational Health and Safety Hazards	Availability of the correct type of PPEs and the adherence to proper use of PPE by all workers Number of workers adhering to PPEs	Contractor/ Resident Engineer	Before commencement of the work
Workers satisfaction	Number of workers' grievances and type Number of resolved grievances	Contractor/ Resident Engineer	Daily
All accidents and incidents are reported to head office within 24 hours and communicated to UNOPS	Number and types of accidents, and injuries recorded	Contractor/ Resident Engineer	within 48 hours
An emergency response plan with details of the nearest hospital or medical center shall be in place and responsibilities are understood by all workers. First aid boxes are available and a list of trained First aiders is posted and known by all workers	Emergency plan banner in the site photo Photos that reflect workers' training in the emergency plan Photo for the first aid box on site	Contractor/ Resident Engineer / Safeguard Specialist	From the beginning of the implementation

Action	Indicators	Responsible[25]	Timeframe
Inspections are conducted to verify the safety measures are in place and documented	Forms and reports filled in every visit	Subarea Staff Resident Engineer	Daily Monthly Bi-monthly
No child labor is permitted, and workers must be 18 years or older. Verifying age by checking IDs and other available documents. Ensure a Labor Log is available, and all workers are registered	Number of child labor (employed/ used or number of recorded workers under the age of 18	Contractor/ Resident Engineer / Community Committee	Daily
Ensure full adherence to COVID-19 precautionary measures by all those involved in the implementation of the subprojects.	Number of workers wearing PPEs Number of workers who have a fever Number or workers maintaining proper hygiene and social distancing	Subarea Staff Resident Engineer	Before commencement of work
Ensure all activities that require specific skills are done by skilled workers.	Number of skilled workers, and type of work	Resident Engineer	Daily
Tools and equipment to be regularly maintained and inspected to ensure they are of acceptable quality and in good working condition for the required activity	Results of the periodically report	Resident Engineer	Weekly Monthly
Involvement of the community in the supervision of the implementation of the subproject and reporting any findings	No. of GRM complaints from the community	Community Committee Subarea Staff Gender Focal Point	Bi-monthly
All construction works are to be conducted during daylight and no work is to be done at night	No. of GRM complaints and number of resolved complaints	Resident Engineer Community Committee	Daily
air pollution, gas emissions, noise, waste, and traffic management	Amount of fumes /dust observed And the number of society complaints on the air quality, noise level or waste at work site	Resident Engineer	Daily
Trees planting shall be conducted as BOQs	Number of planted native trees Photos	Resident Engineer Sub-area staff	Before invoice No. 1
Monitor improper waste by visual inspection	Number of non-compliance with waste storage and handling The number of times wasted was recorded	Resident Engineer	Daily

Action	Indicators	Responsible[25]	Timeframe
	and stored outside a designated area		
Hazardous materials and wastes storage	Number of times hazardous materials and wastes were recorded outside designated zones Visible soil leak	Resident Engineer /contractor	Daily
Soil contamination	A visible change in soil color and visible soil leak Records and number of spills events	Resident Engineer /Contractor	Daily
Monitor the amount of traffic by visual inspection	Number of cars at work site	Resident Engineer	Daily
Ensuring awareness is raised regarding Gender-Based Violence GBV and Sexual Harassment SH among all workers as well as the community. Ensure laws are enforced for any violations	Number of awareness sessions Photos	Gender Focal Point / Resident Engineer / Community Committee	Daily
GBV/SEA/SH (if occurs) are reported in accordance with the law	Number of SEA/SH grievances	Gender Focal Point /Resident Engineer / Community Committee	When happen
Ensure latrines and handwashing stations are available and supplied with water and soap	photos of hand soap Presence of water photos of bins photos of improperly disposed waste Presence of flies	Contractor/ Resident Engineer	Daily
Ensure non-discrimination and inclusion of women and persons with disabilities when selecting beneficiaries	Photos of women's awareness GRM complaints	Gender Focal Point / Subarea staff / Resident Engineer / Safeguard Specialist / Community Committee	Before commencement of work and during the implementation
Deliver awareness to the local community members including women, and marginalized groups on gender and GBV.	Photos for the awareness seasons	Gender Focal Point / Subarea staff / Resident Engineer / Safeguard Specialist / Community Committee	During the project's preparation stages and the implementation
Ensure no explosives are used in the sub-projects and all workers are aware of this.	The supervisor's daily form The outputs of the inspection visits	Contractor/ Subarea staff / Resident Engineer Safeguard Specialist /	Daily

Action	Indicators	Responsible[25]	Timeframe
		Community Committee	
Ensure no financial exploitation of communities or beneficiaries	GRM complaints	Subarea staff / Resident Engineer Safeguard Specialist / Community Committee	Weekly Monthly
Air and noise quality	Equipment (trucks) quality inspection Air and noise inspection and measurement	Contractor/ Resident Engineer / WSSLC	Daily Weekly Monthly
Community satisfaction	Number of grievances raised and types and number of resolved complaints	Community Committee	quarterly
Operational phase monitoring: Visual inspection on the sewage network to assess needed maintenance work	Presence of damage to network, visible sewage leaks into the streets Presence of blocking items in manholes	Community Committee/ Local Authority	Monthly

Table 10 Environmental and Social Monitoring Plan

8 Stakeholders Engagement Plan and Public Consultation:

The stakeholders' engagement has been conducted by engaging all parties that will be targeted in these interventions including relevant local authorities, community leaders, and local communities. The stakeholders' engagement activities include sharing communities' needs, deciding the priorities, and developing the subproject designs and plans. Public consultations have been conducted by PWP social consultants' teams (male and female) in Shik Ali Mohammed hall to inform the local community and community leaders of the activities to take place, identifying subproject beneficiaries, potential environmental and social impacts and mitigation measures, GM and get feedback. Precautionary measures were taken to avoid the spread of COVID-19; social distancing was applied and implemented, outdoor consultations were held, masks were distributed, and all attendees were required to wear them. The full list of attendance is in (annex 4).

Sub Project Intervention	**Consultation Date**	**Consulted Beneficiaries**		
		Male	**Female**	**Total**
Sanitation network for Medical College neighborhood – Dhamar	22/02/2022	55	29	84
Total		**55**	**29**	**84**

Table 11 subprojects Consultation Date

Topics of the Consultations:

- Ensure that communities' needs are in line with their priorities.
- Inform local communities about the activities to be undertaken, the sub-projects timetable, and the work plan.
- Inform them about their rights to have a job opportunity during implementation.
- Raise their awareness about the subproject's potential risks such as safety, health, environmental, and social risks and required control measures.
- Inform them about their roles in monitoring the compliance of contractors and workers in the worksites and their rights to give their concerns.
- Document and address the local communities' concerns, expectations, and feedback.
- Ensure the participation of subproject beneficiaries both females and males.
- Discuss the positive impacts that the subprojects will have on improving services to the beneficiaries.
- Inform them that the road traffic and services may temporarily be interrupted during implementation and how to coordinate with subproject supervisors and contractors to manage that.
- Raise their awareness regarding social safeguards such as GBV, SH, and abuse, that may occur during the implementation and the required measures that should be taken in case of occurrence. Through the use of implicit and indirect expressions in accordance with the local community culture.
- Discussing the designs of the subproject and the way of implementation and the narrow streets that will be targeted.
- Inform them with distribution flyers (Annex 5) about how to use the GM to give their opinions regarding social safeguard, OHS, and any complaints and concerns without fear.
- Raise their awareness of the COVID-19 pandemic and the measures to protect themselves and their families and inform them that during the implementation the control measures for covid-19 will be applied.
- Raise their awareness regarding other diseases such as Cholera.
- Distribution of awareness posters about OHS, COVID-19, GM, and Gender with all beneficiaries to contribute to building positive culture regarding safeguard.

8.1 Public Consultation Findings and Feedback

The consultation process took the form of face-to-face and group interviews with local community members (both males and females) and feedback collected through questionnaires and discussion. The COVID-19 control measures have been applied during the consultation such as distribution masks, providing hand sanitizers, and maintaining a distance of at least 1.5 meters between consulted people. The consultation starts with a brief explanation of the nature and objectives of the subproject and its potential impact and proposed mitigation measures.

The consulted beneficiaries prioritize their needs which in this case are the sanitation network. The consulted beneficiaries have expressed their support for targeted subprojects as they will have positive social impacts on the community. No concerns regarding land, noise, or SEA/SH have been expressed by the beneficiaries, only some concerns are raised during the construction phase such as the provision of

temporary latrines for workers[27], taking care of underground services, restriction access to their houses, working in narrow streets, and water pipes during construction and excavation. Ensure that all construction waste will be transferred to the designated area. Also, they raised the issue of ensuring the quick connection of house points to the network after backfilling the cesspits and avoiding any delay.

Generally, their feedback was positive as they are in great need of the proposed subproject, and they expressed their full support to implement the subprojects as soon as possible.

8.2 Sustainability of Subproject and Community Ownership

PWP engages all affected parties of subproject within the subproject cycle, consultations are conducted at various stages including consultation with the communities for selection of interventions based on focal group discussions with women and men, formation of the Community committee by electing members including female members with the total number of 3 male and 2 females, training on various aspects for operation and maintenance. Also, coordination with Local Authorities / Councils to inform on activities taking place, the possibility of their role in operation and maintenance, their role as facilitators in case of security issues or any disputes, etc., as well as coordination with other IPs such as SFD, UNICEF, other Clusters such as WASH and other agencies in the Field. Furthermore, PWP conducts public feedback sessions with targeted communities during site visits to listen to their concerns and feedback as well as to ensure their acceptance of the interventions.

8.3 Stakeholders Engagement Plan:

PWP will continue to engage the stakeholders during the subproject's implementation by conducting meetings with beneficiaries, community committees, and local authorities to discuss any raised issues, and implementation aspects, as well as listen to stakeholders' concerns and feedback. Subarea's managers will conduct monthly meetings with community committees around four to six times during the implementation to coordinate with them for the implementation and safeguard issues, conducting awareness and training sessions regarding safeguard requirements and their monitoring roles.

Also, PWP resident engineers will be in continuous cooperation and coordination with the community committees at the sites to discuss any issues that might be raised. Furthermore, different meetings with the local authorities may be conducted to work in cooperation to facilitate the implementation. In addition, at the end of implementation meetings with beneficiaries, community committees, and local authorities will be conducted to prepare for the subproject submission and operation process. Also, to conduct the training for beneficiaries and community committees on the project operation and maintenance to ensure subprojects sustainability.

- 27 The contractor shall rent an apartment as an office for the project. In the apartment shall be toilet where will be used for workers. The hired workers will be from the same city where the subproject is. And the sentence reflect a concern raise from the public consultation and its solution is to provide a toilet for workers wit in the rented apartment

Sanitation network for Medical College neighborhood – Dhamar

Figure 12 Stakeholders Engagement

Capacity Building

According to the ESMF, UNOPS will conduct E&S capacity building for different levels in all subprojects' life cycles. Annual comprehensive training will be done for PWP main and sub-areas staff in which revision and updates had been reflected according to the world bank's new ESF. During the public consultation, awareness was given covering all topics in section 8.1 (public consultation and feedback). The executive staff [28]as the main part in managing project implementation at the governorates level will have training seasons in place their responsibilities, liabilities, risk\impact assessment, and mitigation measures plan are represented, and they should sign their commitment to these procedures.

Also, another training will take place for resident engineers where every person's responsibility, implementation procedures, needed forms, risk assessment methods, and general OHS procedures will be given. In site handing to the contractor, PWP sub-area representatives will conduct awareness sessions for workers, community committees, and some of the community members that will represent the required Environmental, social, and OHS aspects needed in the implementation phase. During the implementation phase, different awareness sessions should be done during the different sub-projects period. The supervisor engineer with help from the contractor OHS assistant will conduct daily awareness sessions as possible in which daily expected risks in daily work should be reflected for workers. GBV&SEA, GRM, code of conduct, and Covid-19 procedures will be part of this awareness as well. Every two weeks, the PWP sub-area assistant will be aware of workers and local communities during his site visit. Everyone month, PWP sub-area managers will raise the worker's and the local community's awareness as well. On-site handing over occasion, project maintenance procedures shall be given to local authorities and communities' committees as part of the project closing phase.

9 Grievance Mechanism

As part of an ongoing move to improve its accountability, PWP has developed a GM system for managing, responding to, and monitoring issues within its Programs. The GRM system is accessible to all people engaged in PWP activities including workers[29], contractors, stakeholders, beneficiaries, etc. The

[28] The contractor, supervisor engineer, and contractor OHS assistant.

[29] Workers GM will be part of PWP GM system.

accumulated experience in PWP to respond and interact with all partners and beneficiaries enables it to improve and adopt an efficient GM, focusing on institutionalizing the experience in dealing with complaints and mainstreaming it in the system context including MIS.

GM awareness sessions have been conducted to explain the mechanism and introduce the system to the local communities, including female members and workers. GM brochures distributed to the local community that have full details on the system and complaint boxes placed in the subproject sites which will be opened weekly in a formal meeting with supervision from the local community committee -that is selected earlier during the early intervention stage and is usually consisted of 50% males and 50% females- . The complaints are then registered and classified according to their type and raised to branch offices to be addressed and solved.

Other communication means are also introduced to beneficiaries and listed below

- Complaints box at subproject location which is open every week
- Telephone: 8002626[30]
- SMS, Telephone, and What's up to no. 775626262
- Face to face by visiting PWP offices in Dhamar city

PWP has GRM staff at HQs and locally at the subproject for GRM handling. Each complaint is resolved either at the field by the Supervisor, or the Branch Office Manager or raised to the HQ. Complaint boxes are collected by PWP staff during bi-weekly field visits. Ensure registering all complaints and addressing all that can be resolved in the field. The designated GRM specialist monitors complaints to ensure they are resolved satisfactorily, and complaints are closed. Complaints received will be recorded and investigated and the person who submits the complaints will be notified of the updates on his/her case. Similarly, all complaints received anonymously will be treated at the same level and as seriously as other complaints.

Every effort is made to resolve any issue at the community level and within a time frame of 14 days. UNOPS will monitor the implementation of the CHM system and follow up on pending complaints and provide any needed assistance in case PWP is not able to solve the complaints themselves or higher involvement is required through SRM- Stakeholder Response Mechanism- to help project-affected stakeholders, governments and other partners jointly resolve concerns and disputes. GBV/SEA/SH-related complaints will be managed within the overall GM in which complaints will be managed according to GBV action plan procedures as per the Good Practice Note of the WB SEA/SH guidance[31]. After one year, the GM system will be reviewed to improve it. For instance, by examining the nature of complaints, complaints made by which gender, If the GM is adapted to women if no women made complaints, … etc.

30 During work time and the system has calls record system for the complaints received out of the work time
31 https://thedocs.worldbank.org/en/doc/632511583165318586029002202O/original/ESFGPNSEASHinmajorcivilworks.pdf

Annex 1 – Environmental and Social Checklist

Sub-Project No.	09-4-14754
1: The Natural Environment	
1.1 Are there any environmentally sensitive areas or threatened species that could be adversely affected by the subproject (specify below)? - Intact natural forests - Riverine forest - Wetlands (lakes/rivers/seasonally inundated areas) If yes, how far are the nearest wetlands (lakes, rivers, seasonally inundated [flooded] areas)? _____km Habitats of endangered species for which protection is required under Yemeni laws and/or international agreements Others (describe) (e.g. cultural sites, burial places, etc.)	NA NA NA NA NA
2. Fauna and Flora	
2.1 Will the subproject involve the disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes)?	NA
2.2 Will the subproject lead to the destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development?	NA
2.3 Will the subproject lead to the disruption/destruction of wildlife through interruption of migratory routes, disturbance of wildlife habitats, and noise-related problems?	NA
3. Destruction/Disruption of Land and Vegetation	
3.1 Will the subproject lead to unplanned use of the infrastructure being developed?	NA
3.2 Will the subproject lead to long-term or semi-permanent destruction of soils in cleared areas not suited for agriculture?	NA
3.3 Will the subproject lead to the interruption of subsoil and overland drainage patterns (in areas of cuts and fills)?	NA
3.4 Will the subproject lead to landslides, slumps, slips, and other mass movements in soil?	NA
3.5 Will the subproject lead to erosion of lands?	NA
3.6 Will the subproject lead to health hazards and interference with plant growth by the dust raised and blown by vehicles?	NA
4. Protected areas	
4.1 Does subproject occur within/adjacent to any protected areas designated by the government (national park, national reserve, world heritage site, etc.)	NA
4.2 If the subproject is outside of, but close to, any protected area, is it likely to adversely affect the ecology within the protected area (e.g. interference with migration routes of mammals or birds)	NA
4.3 Would this project increase the current impact on the surrounding environment for example by using more water, chemicals, or machinery than previously? If yes HOW	NA
5. Geology and Soils	
5.1 Based on visual inspection or available literature, are there areas of possible geologic or soil instability (erosion-prone, landslide-prone, subsidence-prone)?	NA
5.2 Based upon visual inspection or available literature, are there areas that have risks of a large-scale increase in soil salinity?	NA

6 Landscape/aesthetics	
6.1 Is there a possibility that the subproject will adversely affect the aesthetic attractiveness of the local landscape?	NA
7. Historical, archaeological or cultural heritage site	
7.1. Based on available sources, consultation with local authorities, local knowledge, and/or observations, could the subproject alter any historical, archaeological, or cultural heritage site or require excavation nearby?	NA
8. Resettlement and/or Land Acquisition	
8.1 Will the subproject require land acquisition?	NA
8.2 If so, will this land acquisition be involuntary?	NA
8.3 If so, will this involuntary land acquisition lead to relocation or loss of shelter, loss of assets, or access to assets?	NA
8.4 If so, will this involuntary land acquisition lead to loss of income sources or means of livelihood (whether or not affected persons must move to another location)?	NA
8.5 Will the subproject lead to involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of displaced persons?	NA
9. Noise pollution during Construction and Operations	
9.1 Will operating noise level exceed allowable/ambient noise limits?	Moderate
10. Solid or Liquid Wastes, including Medical Waste	
10.1 Will the subproject generate large amounts of residual wastes (solid or liquid wastes), including medical waste?	Minor
10.2 If “Yes”, does the subproject include plan for collection & disposal?	NA
11. Pesticides, Insecticides, Herbicides, or any other Poisonous or Hazardous Chemicals	
11.1 Will the subproject require the use of such chemicals?	NA
11.2 If, “Yes”, does the subproject include plan for safe handling, use & disposal?	NA
12. Water and Soil Contamination	
12.1 Will the subproject require large amounts of raw materials/construction materials?	Minor
12.2 Will the subproject generate large amounts of residual wastes, construction material waste, or cause soil erosion?	Minor
12.3 Will the subproject result in soil or water contamination (e.g. from oil, grease, and fuel from equipment)?	Moderate
12.4 Will the subproject lead to contamination of ground and surface water bodies by herbicides for vegetation control and chemicals for dust control?	NA
12.5 Will the subproject lead to an increase in suspended sediments in streams affected by a road cut erosion, a decline in water quality & increased sedimentation downstream?	NA
12.6 Will the subproject lead to the destruction of vegetation and soil in the right-of-way; borrow pits, waste dumps, and equipment yards?	NA
12.7 Will the subproject lead to the creation of stagnant water bodies in borrow pits, quarries, etc., encouraging mosquito breeding and other disease vectors?	NA
12.8 Will this project include the development of a large irrigation scheme?	NA
12.9 Will this project aim at improving an irrigation scheme (without expansion)?	NA
12.10 Will this project change the water quality and quantity in the project area or areas connected to it	NA
12.11 Will this project involve the intensification of production systems that leads to land-use changes (e.g. deforestation), higher nutrient inputs leading to soil or water pollution, and changes in water regimes (drainage, irrigation)?	NA
13. Decent Work	

13.1 Will this project affect the current or future employment situation of the rural poor and in particular the labor productivity, employability, labor conditions, and rights at work of self-employed rural producers and other rural workers?	NA
14. Gender	
14.1 Could this project risk overlook existing gender inequalities in access to productive resources, goods, services, markets, decent employment, and decision-making? For example, by not addressing existing discrimination against women and girls, or by not taking into account the different needs of men and women	Minor
15. Community Health, Safety, and Working Conditions	
15.1 Are indigenous peoples present in the Project area (including the Project area of influence)?	NA
15.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	NA
15.3 Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	NA
15.4 Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	NA
15.5 Will this project permanently or temporarily removes people from their homes or means of production/livelihood or restrict their access to their means of livelihood?	NA
15.6 Will the project bring about consolidation or adjustment of tenure rights?	NA
15.7 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	Minor
15.8 Would the Project pose potential risks to community health and safety due to transport, storage, and construction?	Moderate
15.9 Would the Project pose potential risks to community health and safety due to the use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel, and other chemicals during construction and operation)?	Minor
15.10 Would the failure of structural elements of the Project pose risks to communities? (e.g., collapse of buildings or infrastructure)?	Minor
15.11 Would the Project result in potential increased health risks (e.g., from water-borne or other vector-borne diseases)?	NA
15.12 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Moderate
15.13 Will the Project activities cause any risks for workers during the construction?	Moderate

Table 13 Environmental and Social Checklist

Annex 2 - Site Screening Checklist of Expected Environmental and Social Impacts in consultation with beneficiaries.

قائمة الفحص البيئي الاجتماعي خلال النزول

الاثار البيئية والاجتماعية	نعم	لا	ملاحظات
المجال البيئي			
محطة المعالجة قادر على استيعاب كميات الصرف الصحي من التوسعة المقترحة	√		مطلوب دليل من المؤسسة المحلية للمياه والصرف الصحي
التصميم الفني للمشروع سيضمن عدم حدوث أي تسريب او انسدادات خلال التشغيل	√		
المشروع لن يسبب إزالة لمسطحات خضراء	√		
المشروع لن يسبب أي تأثير على مناطق اثرية	√		
المشروع لن يسبب أي تأثير على مناطق حساسة (مناطق هجرة الطيور، محميات طبيعية)	√		
المشروع سيولد ضوضاء	√		
سيولد المشروع تأثير سلبي على الهواء	√		
سيسبب المشروع تأثير سلبي على المياه الجوفية		√	
سيسبب المشروع تلوث للتربة		√	
سيسبب المشروع تسريب لمياه الصرف الصحي وتولد للروائح المزعجة	√		
سيسبب المشروع تأثير او تغير على ممرات المياه		√	
المشروع في مجاري السيول		√	
سيولد المشروع مخلفات بناء		√	
يولد المشروع مخلفات خطرة (وجود انابيب اسبستوس)		√	
سيودي المشروع الى مخاطر على العمال اثناء التنفيذ	√		
سيؤدي المشروع الى انزلاقات أرضية		√	
المجال الاجتماعي			
المشروع لن يسبب استحواذ على الأراضي او يمر من ملكيات خاصة	√		
المشروع يمثل أولوية للمستفيدين	√		
تم مشاورة المستفيدين خلال مرحلة الاعداد للمشروع واشراك المستفيدين في الاثار البيئية والاجتماعية	√		
تم اشراك السلطات المحلية المعنية في تصميم المشروع	√		
المستفيدين واعيين بالية التظلم والشكاوى	√		
المشروع لن يسبب أي نزاع بين المستفيدين	√		
المشروع يخدم المستفيدين جميعا بالتساوي وبدون أي عنصرية او تمييز	√		
الفئات الضعيفة (النازحين، المهمشين , المعاقين) تم استهدافها بالمشروع وتم اخذ آرائهم ومقترحاتهم	√		
المشروع لن يسبب تعطيل للنشاطات الاقتصادية والوضع الطبيعي للسكان في المنطقة	√		
المشروع سينتج مخاطر صحية واجتماعية على المجتمع	√		
المشروع سيسبب تعطيل لحركة المرور في المنطقة	√		
المشروع سيسبب اغلاق لمداخل او ممرات السكان	√		
المشروع لن يسبب أي نزوح مؤقت او دائم للسكان	√		
يمر المشروع في ممرات ضيقة او امام منازل المستفيدين	√		
ستؤثر أنشطة المشروع على منازل المستفيدين او أي ملكيات اخرى		√	
المستفيدين مدركين لمخاطر أنشطة المشروع خلال التنفيذ	√		

معلومات عامة:	
مدى تلوث الهواء قبل التدخل	لا يوجد تلوث
مدى تلوث المياه الجوفية قبل التدخل	لا اثر لتلوث المياه الجوفية
مدى تلوث التربة قبل التدخل	وجود طفح للبيارات وتكون مستنقعات من مياه الصرف الصحي مصدر للأوبئة والامراض
الوضع الحالي قبل التدخل	هناك احتمالية كبيرة للتلوث المياه الجوفية نتيجة وجود نظام الصرف الصحي القائم على البيارات وجود طفح للبيارات وتكون مستنقعات من مياه الصرف الصحي مصدر للأوبئة والامراض ضرورة تنفيذ المشروع الفرعي في أقرب وقت ممكن لتحسين خدمات الصرف الصحي ومنع الفيضانات المستمرة لمياه الصرف الصحي في الشوارع.

Annex3 – PWP Environmental and Social Responsiveness (ESR) Criteria and UNOPS Exclusion List at Proposal Stage

Note: To be selected and filled according to project type based on PWP baseline study

Proposal Title	Sanitation Network	
Proposal Location	Dhamar Governorate	
ESR Criteria at the Proposal Stage		Confirmation Write Yes or No
Consultation with the local community including a community leader, men, women, and girls was conducted in the proposal stage regarding the design and location of the project. Their opinions were included in the proposal.		Yes
Poor and vulnerable beneficiaries were defined, and the community was obliged to provide help for them in the subproject implementation.		Yes
The project will not have a significant adverse environmental and social impact		Yes
The project will not raise land acquisition problems		yes
Stakeholders are aware of the PWP policy and have agreed to follow/apply them towards a successful implementation of the urban road pavements.		Yes
Targeted beneficiaries are highly in need of this project		Yes
All communities including (Male, females, and children) will benefit from the intervention.		Yes
The operation and maintenance requirements of the project were explained to the community, and an acceptable system was developed for this purpose		Yes
Responsibility for operation and maintenance are defined and committed		Yes
Local communities are aware of project risks and GRM.		Yes
The project will not cause any conflict among communities		Yes
If the answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If the answer is 'Yes' then incorporating this information in the project proposal		

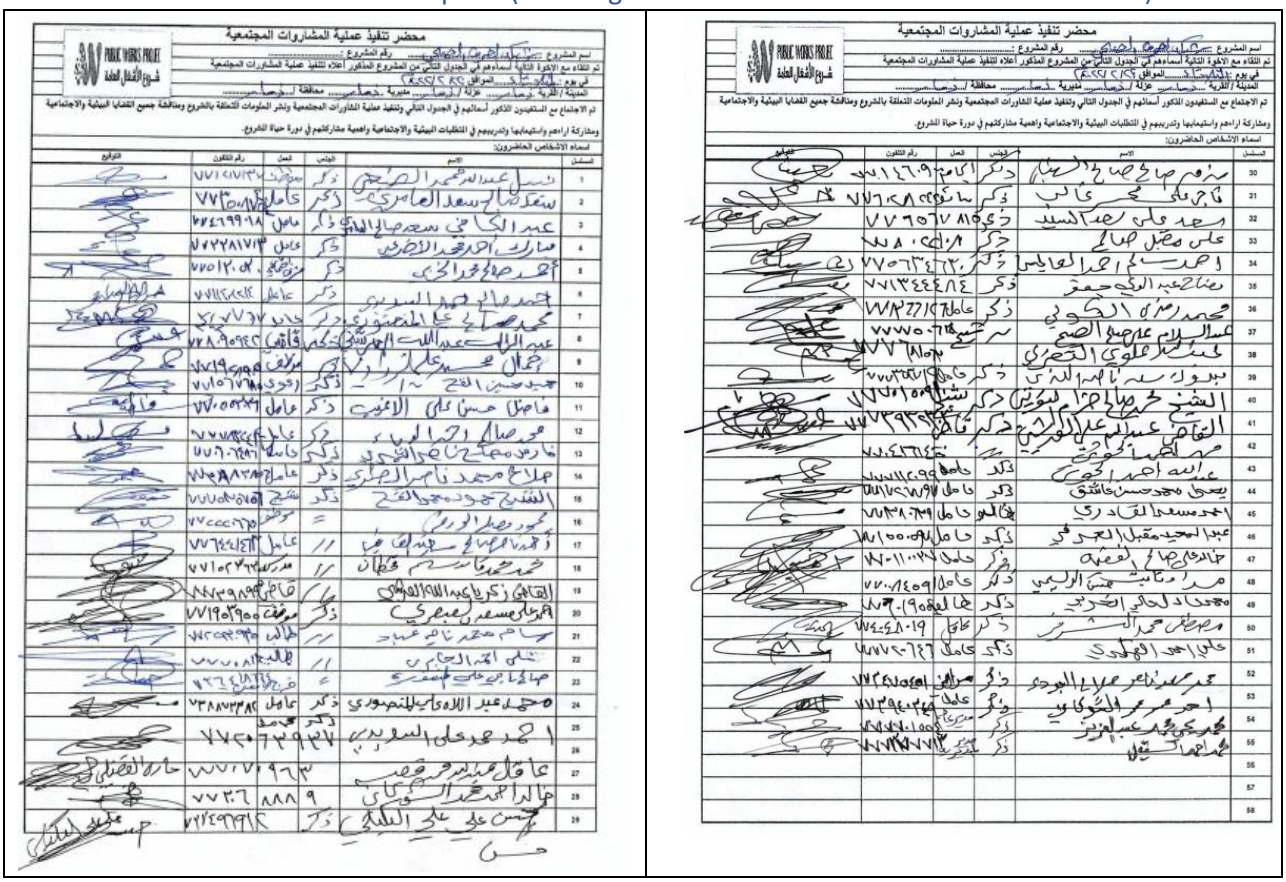
Table 14 PWP Environmental and Social Responsiveness (ESR) Criteria at Proposal Stage

Annex 4 - PWP Checklist of Expected Environmental and Social Impacts to be Addressed at the Design Stage

Project Name	Sanitation Network	
Project Location	Dhamar Governorate	
Check List of the E&S Issues to be Addressed for the construction subproject at the Design Stage		Confirmation Write Yes or No
The relevant authorities were consulted on the design and all their observations were taken into consideration.		Yes
The design of the project will include the ES & OHS monitoring plan		Yes
The project design will ensure local community participation during implementation.		Yes
The design and the urban network contractual materials for example pipelines are in harmony with the surrounding environment and the architectural character of the city.		Yes
GRM tools have been included in the project document.		Yes
A safe work plan has been developed to project activities to control risks.		
OHS measures and Personal Protection Equipment (PPEs), were added to the bidding documents.		Yes
Temporary latrine and wash hand facilities have been included in the project document.		Yes
If any of the answers are "No", then the reasons must be stated in the design report.		

Table 15 PWP Checklist of Expected Environmental and Social Impacts to be addressed at the Design Stage

Annex 5. – Public Consultation Reports (Social agreements & consultation attendance sheets) – Arabic



محضر تنفيذ عملية المشاورات المجتمعية

PUBLIC WORKS PROJECT
مشروع الأشغال العامة

اسم المشروع ..... رقم المشروع .....

تم اللقاء مع الأخوة التالية أسماءهم في الجدول التالي من المشروع المذكور أعلاه لتنفيذ عملية المشاورات المجتمعية

في يوم ..... الموافق ..... / ..... / .....

المدينة / القرية ..... حارة / ..... محافظة / .....

تم الاجتماع مع المستفيدين المذكور أسمائهم في الجدول التالي وتنفيذ عملية المشاورات المجتمعية ونشر المعلومات المتعلقة بالمشروع ومناقشة جميع القضايا البيئية والاجتماعية ومشاركة آرائهم واستيعابها وتدريبهم في المتطلبات البيئية والاجتماعية وأهمية مشاركتهم في دورة حياة المشروع.

أسماء الأشخاص الحاضرون:

التسلسل	الاسم	الجنس	العمل	رقم التلفون	التواقيع
1		ذكر			
2		ذكر			
3					
4		ذكر			
5		ذكر			
6		ذكر			
7		ذكر			
8		ذكر			
9		ذكر			
10		ذكر			
11		ذكر			
12		ذكر			
13		ذكر			
14		ذكر			
15		ذكر			
16		=			
17		//			
18		//			
19		//			
20		ذكر			
21		//			
22		//			
23		=			
24		ذكر			
25		ذكر			
26					
27					
28					
29		ذكر			

محضر تنفيذ عملية المشاورات المجتمعية

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في يوم ..... الموافق ..... / ..... / .....

المدينة / القرية ..... حارة / ..... مديرية ..... محافظة / .....

تم الاجتماع مع المستفيدين المذكور أسمائهم في الجدول التالي وتنفيذ عملية المشاورات المجتمعية ونشر المعلومات المتعلقة بالمشروع ومناقشة جميع القضايا البيئية والاجتماعية ومشاركة آرائهم واستيعابها وتدريبهم في المتطلبات البيئية والاجتماعية وأهمية مشاركتهم في دورة حياة المشروع.

أسماء الأشخاص الحاضرون:

التسلسل	الاسم	الجنس	العمل	رقم التلفون	التواقيع
30		ذكر			
31		ذكر			
32		ذكر			
33		ذكر			
34		ذكر			
35		ذكر			
36		ذكر			
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47		ذكر			
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49		ذكر			
50		ذكر			
51		ذكر			
52		ذكر			
53		ذكر			
54		ذكر			
55		ذكر			
56					
57					
58					

محضر اتفاق بين مشروع الاشغال العامة والمجتمع المحلي بالالتزام بجميع متطلبات الحماية البيئة والاجتماعية والمساعدة في تنفيذ نشاطات المشروع بصورة امنة

انه في .الثلاثاء.... الموافق ٢٢/٤/٢٢٢٠م تم النزول الميداني الى موقع المشروع ......كلية الطب.......... رقم المشروع .... تمويل ....

من قبل فريق مشروع الاشغال العامة وهم:

1-...زكريا محمد الصباحي.......

2-...جمهان حسين المبارد

3-...عامر الصغير..............

وتم توعية المجتمع المحلي بمتطلبات الحماية البيئة والاجتماعية للمشروع وهي كما يلي:

1. أنواع المخاطر الناتجة من تنفيذ نشاطات المشروع.
2. تجنب الدخول الى مناطق العمل من قبل الأشخاص الغير مصرح لهم.
3. عدم ترك الأطفال في المناطق القريبة من نشاطات المشروع.
4. نظام الشكاوى وطرق استخدامه.
5. ضرورة مشاركة المجتمع المحلي في متابعة إجراءات السلامة والتبليغ فورا في حال وجود مخاطر او عدم التزام المقاول.
6. ضرورة تنفيذ التوعية المستمرة من قبل لجان المستفيدين وكبار الاعيان لجميع افراد المجتمع المحلي بضرورة الالتزام بمتطلبات الصحة والسلامة المهنية والبيئة.
7. المشاركة المجتمعية والنوع الاجتماعي والمساواة
8. الإجراءات الاحترازية لوباء كورونا والكوليرا
9. الحد من العنف القائم على النوع الاجتماعي GBV.

وعلية تم الاتفاق بين مشروع الاشغال العامة والمجتمع المحلي للمشروع المذكور أعلاه.

أعضاء لجنة المستفيدين	الصفة	التوقيع
مصطفى محمد علي الشرعي	عاقل	[signature]
محمد احمد الحوثي	موظف	[signature]
نبيل عبدالله الصبحي	موظف	[signature]
آمال اسماعيل دادية	تربوية	[signature]
بشرى علي مثنى الرحمي	تربوية	[signature]

رئيس لجنة المستفيدين

التوقيع: [signature]

محضر تنفيذ عملية المشاروات المجتمعية

PUBLIC WORKS PROJECT
مشروع الأشغال العامة

اسم المشروع : .... رقم المشروع : ....

تم اللقاء مع الاخوة التالية أسماءهم في الجدول التالي من المشروع المذكور أعلاه لتنفيذ عملية المشاورات المجتمعية

في يوم :.................. الموافق : / / م

المدينة / القرية .... عزلة /.............. مديرية .... محافظة /..............

تم الاجتماع مع المستفيدون المذكور أسمائهم في الجدول التالي وتنفيذ عملية المشاورات المجتمعية ونشر المعلومات المتعلقة بالمشروع ومناقشة جميع القضايا البيئية والاجتماعية ومشاركة اراءهم واستيعابها وتدريبهم في المتطلبات البيئية والاجتماعية واهمية مشاركتهم في دورة حياة المشروع.

اسماء الاشخاص الحاضرون:

المسلسل	الاسم	الجنس	العمل	رقم التلفون	التوقيع
1	امال اسماعيل دادية	انثى	تربوية	٧٧٢١٩١٢٦٢	[signature]
2	بشرى علي مثنى الرحمي	//	تربوية	[illegible]	[signature]
3	شمس شمسان الصباحي	//	ربة بيت	٧٧٤٦٢١١٥٧٤	
4	زمزم حمادي الخفيفي	//	//	—	
5	علياء عبدة الشركاني	//	//	—	
6	[illegible]	//	//	٧١٤٧٢٨٣٣	
7	[illegible]	//	//	٧٧٣٦٩٨٧٧	
8	[illegible]	//	//	.	
9	فاطمة الحايج	//	//		
10	[illegible]	//	//	٧٧٧٦١٥٤٤٥	
11	احلام عزيز	//	//		
12	[illegible]	//	//		
13	[illegible]	//	//	٧٥١٧١٤١٦٥	
14	[illegible]	//	//		
15	[illegible]	//	//		
16	[illegible]	//	//		
17	[illegible]	//	//		
18	[illegible]	//	//	٧٧٣٥٧٩٢٧	
19	[illegible]	//	//		
20	[illegible]	//	//		
21	[illegible]	//	//		
22	[illegible]	//	//		
23	[illegible]	//	//		
24	[illegible]	//	//	٧٧٥٩٨٤٤٨٦	
25	[illegible]	//	//		
26	[illegible]	//	//	—	
27	[illegible]	//	//		
28	[illegible]	//	//		
29	[illegible]	//	//		

بسم الله الرحمن الرحيم

الجمهورية اليمنية
مشروع الأشغال العامة
وحدة إدارة المشروع

اتفاقية تنفيذ مشروع صرف صحي لحارة كلية الطب

اسم المشروع : مشروع .... – العزلة .... – مديرية .... – محافظة/ ذمار رقم المشروع :........-...-....

انه وفي يوم الثلاثاء الموافق ٢٢/٤/٢٠٢٢م تم الاتفاق بين كل من مشروع الأشغال العامة ويدعى في هذا الاتفاق بالطرف الأول والإخوة ممثلوا السلطة المحلية مع الأخوة ممثلي أهالي (لجنة المستفيدين والتي تم تشكيلها وانتخاب الهيئة الادارية لها) .... – مديرية .... ويدعوا في هذا الاتفاق بالطرف الثاني وبعد التأكد من إحتياج المنطقة المذكورة للمشروع المذكور وضرورة التدخل في تنفيذ شبكة الصرف الصحي في شوارع المنطقة والتي يقر الطرف الثاني بموجب هذا الإلتزام بأن هذه الشوارع والساحات أوالمساحات الجانبية التابعة للشوارع والطرق وأماكن الحفر للمواسير وأماكن تشييد المناهل وغرف التفتيش وخلافة وكذلك الأرض المخصصة لمحطة المعالجة والواقعة في حارة كلية الطب ...... لا تتعلق بملكية خاصة أوعامة وأنه ملزم بحل أي إشكال قد يظهر في أي موقع في المنطقة بمسل التنازلات أو التعويض أو خلافه، وإن الأطراف تلتزم بما يلي:

(1) يقوم الطرف الأول بتنفيذ أعمال الدراسة والتصميمات والرسومات والتي توضح كل مكونات المشروع واللازمة لكل الأطراف كل بمساحته التي تم الإتفاق عليها، ويتمثل جزء من مساهمة الطرف الثاني في تسهيل أعمال المهندسين والفنيين والمقاول المنفذ وتذليل كافة الصعوبات التي قد تظهر خلال أعمال الدراسة من قبل أهالي المنطقة مثل الاعتراضات على أماكن الحفر والردم، ومواقع الأعمال الملحقة (عبارات، مواسير، خنادق تصريف للمياه، جدران ساندة، ...الخ)، وعمل الطرقات اللازمة لخدمة المشروع والعمل على حل كافة المشاكل الأخرى مع الأهالي (مهما كان نوعها) والتي قد تظهر خلال أعمال الدراسة أو التنفيذ أو حتى عند التسليم أو بعد التسليم لمكونات المشروع المساهمة العينية أوالمساهمة النقدية المطلوبة.

(2) يقوم الطرف الأول بواسطة المقاول المعين من قبله بتنفيذ مكونات المشروع وبموجب الرسومات وجداول الكميات الخاصة بالمشروع،ويلتزم الطرف الثاني في هذا بالموافقة علي المواقع التي تم اختيارها لمكونات المشروع خلال أعمال الدراسة والمسح، وبعدم توقيف تنفيذ العمل في هذه المواقع ، سواء كانت أعمال حفر او دمج و خلافه ،وكذلك يلتزم الطرف الثاني بتوفير مقاطع الأحجار في المنطقة والتي يقرها المهندس المشرف ويتعهد الطرف الثاني بعدم إعتراض المقاول عند أخذ الأحجار من تلك المقاطع والقيام بحل المشاكل في هذا الموضوع مع الأهالي مهما كان نوعها.

(3) يوافق الطرف الثاني على التواجد الميداني المستمر قبل وخلال فترة التنفيذ مع فريق التنفيذ وذلك للإحاطة بكل مكونات المشروع على الطبيعة ومعرفة طريقة التنفيذ والتشغيل حتى يسهل عليهم إدارة المشروع وصيانته مستقبلاً، وعند وجود أي ملاحظة على عملية التنفيذ فأن على الطرف الثاني رفعها إلى المهندس المشرف والمعين من قبل مشروع الأشغال العامة أو إلى مدير المنطقة الفرعية.

(4) يلتزم الطرف الثاني بإستخدام هذا المشروع في المجال الذي صمم من أجله وهو تصريف المياه الخارجة من البيوت ومعالجتها وتنظيم استخدام المياه المعالجة بسب توجيهات المهندسين المختصين وعدم إستغلال هذا المشروع لأي غرض خاص أو عام أو أي استخدام آخر خلاف ذلك مهما كان.

(5) إن لمشروع الأشغال العامة الحق في إلغاء هذا الاتفاق وتعهداتها إذا توقف أو سار المشروع ببطء طالما كان الأهالي في المنطقة هم السبب، أو عند مخالفة أحد البنود المذكورة أعلاه.

(6) إن مشروع الأشغال العامة لن يتحمل مسئولية عن أي ضرر جسماني لأي طرف كان نتيجة لتشييد هذا المشروع مهما كانت الأسباب.

(7) في حالة إلغاء هذا المشروع لأي سبب كان فإن الطرف الثاني (ممثل الأهالي) يلتزمون بعدم اعتراض المقاول في سحب أدواته ومعداته من الموقع.

(8) تعتبر هذه الاتفاقية ملزمة للطرفين بعد التوقيع عليها وتعميدها.

الطرف الثاني:

(1) الهيئة الإدارية للمشروع (ممثلوا الأهالي المستفيدون) ....

	الاسم	التوقيع
1 -	مصطفى محمد الشرعي	[signature]
2 -	محمد احمد الحوثي	[signature]
3 -	قيس عبدالله الصبحي	[signature]
4 -	آمال اسماعيل دادية	[signature]
5 -	[illegible]	[signature]

(2) المجلس المحلي للمنطقة

(3) مدير عام المديرية .... أمين المحافظة – رئيس المجلس المحلي

الطرف الأول
مشروع الأشغال العامة
مدير المنطقة الفرعية

– مدير مشروع الأشغال العامة
م/ سعيد عبده أحمد

[stamps and signatures]

Sanitation network for Medical College neighborhood – Dhamar

Table 16 Public Consultation Reports (Social agreements & consultation attendance sheets) - Arabic

Annex 6 – PWP Complaint Handling Mechanism

Figure 5 PWP Complain Handling Mechanism